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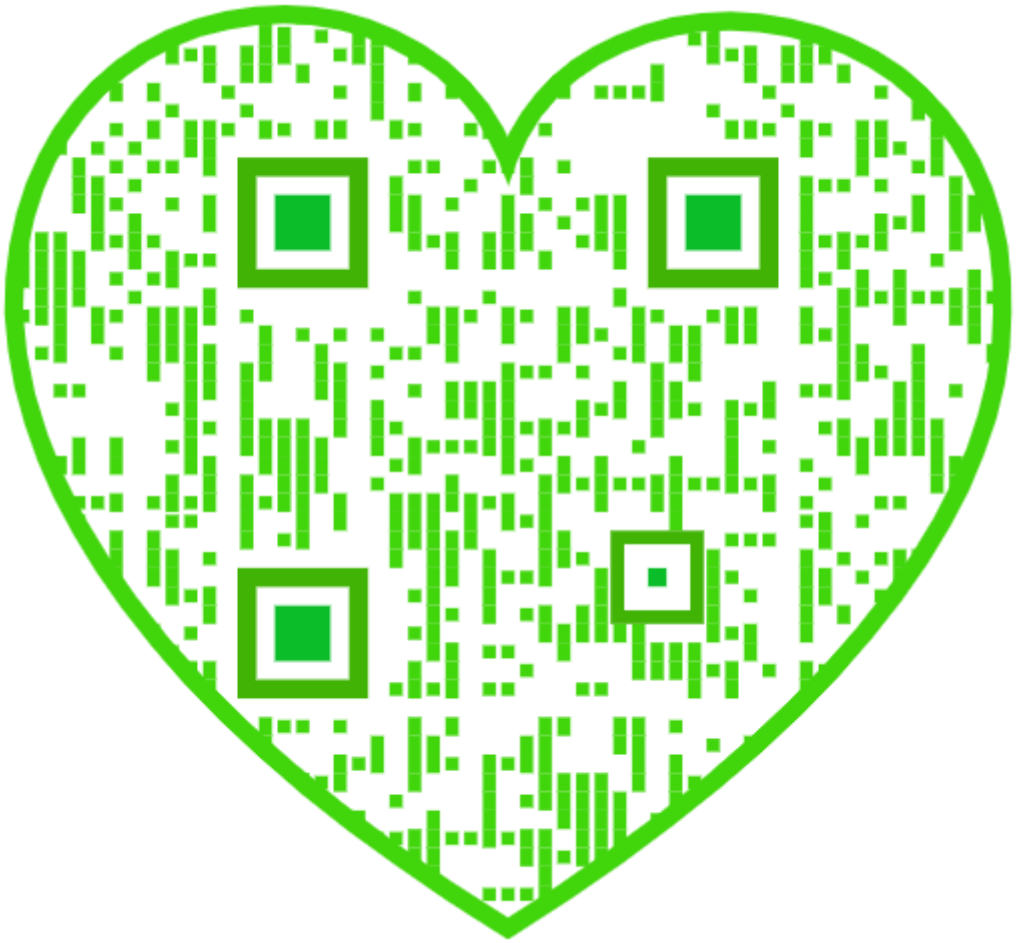

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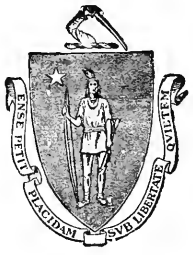

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ANOTHER YEAR'S WORK.

Readers, along with ourselves, will be reminded by the heading of this page that another year's work is now ended, and a new volume of the BRITISH BEE JOURNAL begun. Nor is there any need for more than a brief word of preface in starting on our thirty-second annual journey, beyond expressing our indebtedness to the able staff of voluntary contributors who have largely helped in making the B.J. a welcome visitor to the "Homes of the Honey Bee," not only in this country, but in distant lands where British bee-keepers have made a home. For the rest, we prefer to let the index in last week's issue speak for itself as testifying to the information contained in the just-completed volume. To hope, or even desire, that there would be entire uniformity of opinion among bee-men would, we fear, be expecting too much; not only so, but life would be deprived of half its zest and interest if we all saw things eye to eye. Therefore, so long as divergence of view is expressed courteously and with due regard to others—while avoiding criticism that is needlessly offensive—few have cause to complain, least of all ourselves.

What we do value very highly is the cordial encouragement we receive from all fair-minded readers in our methods of upholding what we believe to be the best interests of British bee-keeping. This has been forcibly evinced in the frequent cheery "send offs" and the many seasonable expressions of good wishes for the welfare of the B.B.J. and its Editors received during the past few days.

Nor is it a small matter for our journal to have begun its thirty-second annual volume in these days of "come and go" journalism. For ourselves, we regard its length of years as a sure sign that it has "come to stay." In other words, we take for granted that it is serving the purpose for which it was started, and so long as its present Editors have control, the principles laid down at the outset will be rigidly adhered to.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS *of the 'British Bee Journal,' 10, Buckingham-street, Strand, London, W.C." All business communications relating to advertisements, &c., must be addressed to "*THE MANAGER, *'British Bee Journal' Office, 10, Buckingham-street, Strand, London, W.C."*

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

COMMENTS ON CURRENT TOPICS.

[5374.] I have at times a hankering for the old familiar heading, and as several "points" lately dealt with require comment, I have grouped them in my present article.

Moot Points.—1. The originator of this discussion seems to take exception to something I wrote about Ligurian bees, but leaves it rather hazy and uncertain wherein he differs from me. He must remember, however, that I have written repeatedly on this subject, viewing them under diverse circumstances, so that one single point must be taken in connection with others, and no definite deduction can be drawn from one isolated instance. One single swallow does not make a summer! 2. The question of quilts, pervious or impervious ones, has always been considered an open one, and their success in safe wintering bees does not depend so much on the use of the one or the other as on the intelligent treatment of the other coverings, the provision of a vacant bottom space, and a large or small entrance at times. 3. A bee-keeper lately "let off steam," and used many vituperative expressions, in utterly condemning the use of hives with frames parallel to the entrance. Though having a bias in favour of those at right angles, I pointed out some cases of eminent success obtained by their use, thereby checking his eloquence, and at last I elicited the information that he had never used

frames in the position he condemned. Does not this point a moral in encouraging an open mind in this and other "moot" points?

Hive Roofs.—Various devices have been forwarded me since I wrote on hive roof coverings, but I think in all cases they are of plans and materials tried, and, for the most part, discarded. One or two have missed the point. Their material is all right, if certain things are attended to, or certain treatment given. What I desiderated was something certified to be waterproof, when turned out by the maker, and requiring no after doctoring, which, in the hands of the amateur, in nine cases out of ten turns out a complete failure, making the cure worse than the disease. I have seen, for instance, a few cardboard covers thoroughly waterproof, but I know of many simple pulp. Why does not the maker turn them out thoroughly waterproof, and guaranteed to be entirely reliable? I do not quite admire black felt on hives, and I have a distinct reluctance to have my hands and clothing daubed with tar, which, if these covers are to continue long efficient must be used liberally.

Uniting Stock to Swarm.—A recent writer seems to think that he has scored a point in mentioning his own practice of at once shifting the parent hive to a distant site when hiving his swarm on the old stand, as thereby he contributes the flying bees to the swarm, and thus considerably strengthens them. Practically, this is the result when the orthodox plan, as I may designate it, is followed; for planted down, as the swarmed lot should be, almost at right angles to its former position, we give the new hived swarm all the adult flying bees. But, by still further manipulation, the already strong and powerful colony is strengthened still further, for the hive entrance is brought gradually in line with the new colony, which, just before a second swarm is due, is bodily carried away some fine morning to a distant situation, and all its flying bees on returning from the fields join their old comrades, and, being all heavily laden with rich stores, are admitted without let or hindrance by the bees at the entrance, and so amalgamate that there is a happy union. If this is done in an intelligent way, we have still two stocks; one able just to pull through, gather stores, secure a fertile young queen, and a large number of young bees fit for next spring's work; while the other may be thoroughly relied on to do magnificent work, owing to its strong force, if a full flow is on. This system deserves more attention than it has as yet received.

Buying Bees.—The season is just approaching when many hives of bees will change hands, and, right here, I would advise caution being used before a bargain is struck. Even in ordinary years this is advisable, but, after last season, too many lots will be worth very little more (if any) than the price of an empty second-hand hive. Boswell, long ago, wrote: "It is with a beehive as with a wife, never take one on the recommendation of another person." To this I might add a saving clause—if he has an interest in it, and you know practically nothing of bees. It is, as our Scotch phrase expresses it, like "buying a pig in a poke." Buy from a reliable dealer, who has made a name in the bee world and has to uphold it, and you are safe. But many of our minor, or occasional, dealers are not reliable. I am sorry to say it, but I must. Some of them deserve to be suppressed, and I would strongly advocate that the B.B.K.A. should deal with some of the worst examples, and expose their nefarious dealings. Here is a plan at least worth considering. Let advertisers express their willingness to subject points of difference to that body as a Court of Appeal. We should here have an impartial jury, without any bias for either party, to weigh evidence and give a just decision, both parties first agreeing to abide by the verdict.

The Absolutely Best Hive.—Somebody lately queried which hive now on the market best agrees with the above description. The querist had all his wits about him, and his question is not, as I have heard it put, "rather silly," as it will be noted he does not consider we have yet reached perfection. I assert we have excellent hives on the market, while many others are good, bad, and indifferent. All our principal dealers turn out really good hives. I have handled most of them, and can certify that they are, used intelligently, thoroughly trustworthy for any system of bee-keeping. I could name a dozen entirely reliable, and every one of the dozen would be "absolutely the best hive" on the market.

Bee Books.—Apiculture is not on the down grade, judged by what must be a very fair test, viz., the demand for bee-literature. Six separate new books, or new editions, have been launched on the bee-keeping world in the space of a few weeks. During the past year a whole edition of the "Guide Book" has been sold out, representing 5,000 copies, and the eighteenth edition, now in the press, means a similar number to be cleared out likely during the year just opened. The simple statement of this fact establishes the truth of the claim that it is "the most popular and widely-read guide book on bees extant," and I have already stated, and again repeat, that to all engaged in bee-keeping, or meditating a start, it is a work quite indispensable, and should be in the hands of every up-to-date bee-keeper.—D. M. M., Banff.

SHOWS AND SHOWING.

MR. WESTON'S FURTHER VIEWS.

[5375.] In the letter you kindly inserted in last issue I dealt with the reasons for, and object to be gained by, the recent motion passed by the Council of the B.B.K.A. concerning the purchase of prize exhibits. With your permission I should like to add somewhat on the subject of "Showing" and the "Professional Exhibitor." At the outset I wish to disclaim any ill-feeling whatever against any exhibitors—they fully earn all they win. I have been an exhibitor myself, and am proud of my few prize cards. The winning of them has taught me the amount of time, care, and expense that must be given before the welcome card arrives; therefore, so long as the Schedule Rules are complied with let every exhibitor take all he can. But I wish to lift this discussion to a somewhat higher plane. The Show Schedules and Rules have for a long time past been issued in nearly the same words and form, and the exhibits and exhibitors are the outcome of them; if anyone is dissatisfied with the result let the Schedule and Rules bear the blame. I for one am dissatisfied. The object of a honey show I consider should be the improvement of the products of bee-keeping by creating a widespread spirit of emulation among bee-keepers and the stimulation of honey sales by the exhibition of good honey at a reasonable price. Are these results attained by our present shows? I think not. It is the constant complaint of honey-show secretaries that the entries are diminishing. At seven shows held last year an aggregate of 260 prizes only drew 266 competitors. It appears, then, that the result of our present system is the attainment of a very high degree of excellence in a very limited circle of competitors. I shall be reminded of the educative value of these choice exhibits, where they come under the eye of a bee-keeper who is striving to improve. They are no doubt useful by setting a standard of quality, but to the ordinary bee-keeper they act as a deterrent to showing, as they are so manifestly beyond his power of competing. Then, from another point of view—viz., the business standpoint—what value have these same exhibits? What do they represent? By the letters you have printed their owners admit that in most instances they represent nothing but themselves—viz., the sections or jars shown; therefore, they have no interest for business men, and are treated by them as they would treat museum curiosities. In support of this I will cite Mr. Woodley, p. 493: "First prize quality honey is not, except under very exceptional conditions, produced annually." Mr. Loveday, p. 493: "I have never yet been able to produce more than one dozen sections of exhibition quality" (in a season). "The same applies to really good exhibits of light-coloured extracted honey and first-class wax." Mr. Woodley, p. 512, indeed, considers there is so small a quantity of this choice honey that should the few dozens of prize exhibits be brought up it "will either extinguish the Dairy Show altogther so far as the honey classes are concerned or . . . enable exhibitors of inferior quality to take prizes." I am not so pessimistic; the Dairy Show will still find a supply of sound honey to maintain its reputation. It is, however, only too true that the basis of the outcry in your columns from our leading exhibitors is the fact that there is no saleable quantity at the back of these choice exhibits. May I now suggest to Mr. Loveday that this fact is the reason why local committees treat honey shows "with meanness of a decided kind"; also, said committees may have become weary of seeing their liberality constantly divided among "about half a dozen bee-keepers"; and if "it may be truly said, very few bee-keepers make much of an effort to stage exhibits that will be a credit to themselves," what I ask has become of that widespread spirit of emulation that honey shows should foster? My opinion is that it has been steadily crushed out by the fortunate twenty exhibitors who, as your columns prove, carried off one-third of the number of prizes given in 1903.

Is there a remedy? Can we bring back our shows to a more business-like and healthy footing? I fear it will be a most difficult task. The causes that have produced the present state of things have been in action so long that much effort will be required to alter them, and patience to wait the result of such alteration. One alteration that would have immediate result (if widely advertised in each county *at once*), and would reach down to the average bee-keeper, is the *abolition of Open Classes at County Shows.* If a county were divided up into districts, with classes and prizes for each (they need not be of great value), and a good county champion prize for the best of each kind in the show, I think we might fairly expect a renewal of interest in exhibiting, and in consequence an improvement in the general crop of honey, for no bee-keeper can pay attention to the details necessary for show-work without improving his whole output. Next, would it not be well to do away with the folly of offering prizes for dark-coloured honey which no self-respecting shopkeeper would put upon his counter? Sometimes, I admit, one meets

a dark honey of good flavour, but 'tis very seldom; the money-prizes that now go to it would be far better spent in further encouraging the better grades of granulated and light extracted honey. If one of the advantages of gaining the county championship prizes were a free entry at one of the large London shows, a class might be got together well worth seeing.

Open classes should be confined to the greatest of the agricultural and horticultural shows, such as can command an interest over the whole country.

There is another class of the community upon which our honey shows have had an educative influence—that is the shopkeeper. He has learnt what to seek to put before his customer, and that knowledge is proving the death-blow of the dirtily-kept skep; and with the disappearance of the skep from the back-garden of the agricultural labourer comes the advent of the frame-hive in the allotment of the artisan. The reason lies, not in the failure of the expert lecturer to persuade the labourer, but in the wretched housing of so many. Where in the crowded two or three-roomed cottage can space be found to store the things required to work a few—even two—hives? The children—and frequently a lodger—take up every available inch, so, I fear, modern bee-keeping is not for him. The main-stay of our village bee-keeping must be the artisan, carpenter, blacksmith, gardener, small shopkeeper; and any man or woman with a small income and time on hand, and, if possible, I would officer my bee-corps with the schoolmasters and clergy. The sight of honey won from hives in a school-garden is a potent lecturer to the enquiring scholar, and in time will breed the active exhibitor.

Apologising for the length to which my remarks have run, I am—T. I. WESTON, Balham Park Mansions, January 4.

PREVENTING AFTER SWARMS.

[5376.] May I trespass upon your space to ask Colonel Walker if he will kindly answer a question or two with regard to treatment of swarms. I am thinking of trying the plan he recommended in a former number of the B.B.J. for preventing after-swarms.

By the plan referred to, the swarm is to be hived on the old stand, and the original stock moved to fresh quarters. Then, in the autumn, the swarm and old stock are joined up again.

Now, I am a busy man, and my spare time is very limited. I should therefore like to avoid the trouble of moving bees two feet per day towards each other, which, with sixteen hives, would be rather a big business. I am also single-handed, and should have to do all the lifting and carrying myself. My question is: "Can Colonel Walker recommend a plan for avoiding this labour?" Would it do to place swarm from No. 1 hive near to stock No. 2, and swarm from No. 2 near stock No. 1, and in autumn join swarm from No. 1 hive to original stock No. 2?—S. DARLINGTON, Charing, Kent, January 4.

DRONES AT CHRISTMAS TIME.

[5377.] A few days ago I chanced to see a drone flying in the air, and watched with some anxiety to see which of my hives it would enter. I soon saw it alight on the flight-board of a hive, which latter was at once examined, when I found quite a number of drones among the bees. The ten frames are well supplied with stores, and the bees are strong in numbers. I did not see a queen or any signs of one, therefore I came to the conclusion they are queenless, and I shall unite a small lot to them that have but little to live, on the first chance.—JIM, Ipswich, January 1.

SHOWS AND SHOWING.

MR. WESTON'S VIEWS.

[5378] Referring again to the above subject, I notice that in his letter on page 523 Mr. Weston says: "The motion was not intended to bar the honest exhibitor from showing and taking prizes *as often as he has the opportunity* (the italics are mine); but this is precisely what it does, and especially the small producer, whose "next best dozen"—to quote Colonel Walker on page 524—is generally out of it in a strong competition. Can anyone say this is not so? I quite agree that the evil of buying prize exhibits to be re-exhibited in another name should be stopped if possible. But the producer has the remedy in his own hands, viz., to put a prohibitive price on show specimens, as is done in other pursuits (poultry-showing, for instance), at least until after the "Dairy Show" has been held each year. Mr. Weston proposes to remove the first prize exhibits entirely from further competitions. This practically puts the second or third prize lots—which may very nearly equal the first-named for quality—at the top as regards competition at future shows, and yet *they* may be sold for any purpose whatever. Where does the efficacy of Mr. Weston's plan come in? I think it entirely fails to touch the evil we all complain of, while it unjustly hampers the honest exhibitor who strives to attain a high standard of excellence.—A. W. WEATHERHOGG, Willoughton, Lincoln, January 1.

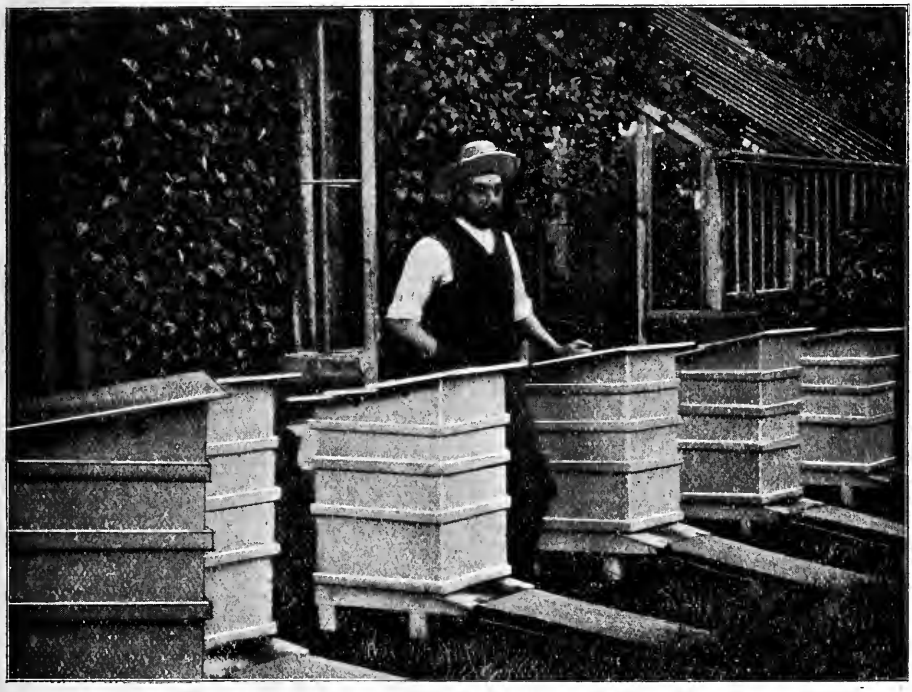
(*Correspondence continued on page* 6.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

The illustration below affords a good example of the work of an amateur hive-maker, and we rather fancy it will cause some surprise to be told that the hives seen cost the owner 1s. 3d. each for timber used. For the rest, the notes our friend sends regarding his bee-keeping need no addition from us. He says: —

"From earliest childhood, I have been a great lover of animals, reptiles, and of all insect life, and later on, having studied entomology, you will readily understand that bee-keeping has a great fascination for me now.



MR. C. H. TOMLINSON'S APIARY, HOLLYWOOD, BIRMINGHAM.

Some six years ago I bought, at the sale of a Scotsman's belongings, an excellent straw skep, part of an 'odd lot' This I kept by me, feeling sure that I should shortly capture a truant swarm of bees, which are very common hereabouts; but, strange to relate, not one vagrant swarm did I see until the year I bought my first lot of bees, since which time I have captured several. Like most successful bee-keepers—for I claim that distinction—I started with a single stock in a frame-hive, purchased on March 3, 1900, from a gentleman near by, who is now a valued friend. This proved a very sound investment, for my record says, 'May 26, swarmed,' and later on, 'took off thirty-five completed sections, and 8 lb. of run honey, which took first prize at a local show.' The same year I drove three lots of bees from skeps, united them in one frame-hive, and finished up the season with a profit of £2 14s. 1d. Since then I have gradually increased my apiary, until I now have sixteen stocks in frame-hives.

Being a fairly good amateur carpenter, I never buy anything I can make, all of the six hives shown in photo being my handiwork, and the respective pairs which stand on either side of the one upon which my arm rests are the identical four hives mentioned in an earlier number of the B.B.J. as costing in timber 1s. 3d. each! The design I cribbed partly from the one I first bought, partly from an illustration in an early edition of the 'Guide Book' (I have three editions of that work), and from my own ideas, and so far I have found these hives work more satisfactorily than any other pattern. They are constructed to take ten standard frames in brood-nest, and overhead either two boxes of twenty shallow-frames, or two racks of sections. All parts are interchangeable, and there is room for another 6 in. super to each, which I did not find necessary this poor season. I am about to make five more hives for next year's use, out of inch 'Canary wood,' the

body-boxes of which will cost as much as a whole hive made like those shown above, though it is an open question whether they will answer the purpose better, or be more profitable in the long run than the cheap ones.

This is not by any means a first-class honey district, though better than some of our county; consequently we do not get 'record takes,' my best so far being 58 lb. from one hive (super honey only, of course); still, good profits can be, and are, made by those who care for the bees, and will bestow upon them the small amount of attention they really require, in comparison with the unstinted and willing labour the bees give in return."

CORRESPONDENCE.

(*Continued from page* 4.)

CLIPPING QUEEN'S WINGS.

A LINE FOR BIRD-LOVING BEE-KEEPERS.

[5379.] In reply to Mr. Illingworth (5364, page 516), I do not think it causes any pain to cut the wing of a queen bee, or certainly not more than in cutting the beak of a bird. I am very fond of birds, and I have no doubt many B.J. readers are like myself, so I send the following as possessing interest for the latter. I have a pet skylark that I value very highly. He comes out of his cage every morning for a bath in a tin of sand, then flies on to my wife's shoulder for breakfast, which he takes from her mouth with his beak as she turns her head round to him. If you pretend to fight him he will turn on you like a bantam cock—in fact, he can do anything but talk; and owing to his having so much liberty, I regret to say he has suffered from accidents. Once he had his beak broken, and was unable to eat for a fortnight. We fed him on cream, which he was accustomed to take from a spoon; but on getting strong again the points of his beak grew across each other, so that he was unable to pick anything up. Fearing to hurt the bird by cutting his beak, I consulted a naturalist, and was told it would not hurt the bird at all, as there was no blood in the beak; he also said the beak would again need cutting at intervals. This is two or three years ago, and he has been operated on a dozen times since without suffering at all. My pet bird is now in full song, and the picture of health, and enjoys his freedom very much. About three years ago, on returning from the moors, my wife very sorrowfully told me she had lost "Dick"; he had been away for seven hours, and was given up as lost for good and all. But in the evening my wife went again into the lane, and was calling out "Dick! Dick!!" in the faint hope he might be near and hear the call, when he dropped from a tree close by at her feet, and commenced eating grass quite coolly; but he was very glad to be in his cage once more and have a good meal, which he evidently needed very much.—J. PEARMAN, Derby.

SHOWS AND SHOWING.

EXHIBITING AND PRIZE WINNING.

[5380.] I ought, perhaps, to offer an apology to your correspondents, Messrs. Loveday and Weatherhogg (who write on pages 512 and 513) for making the statement in B.B.J. of December 17 (5356, page 507), as I am evidently under a delusion as to the object for which bee exhibitions are held. My impression was that shows were got up with the laudable object of furthering the interests of the bee-keeping industry by bringing honey production to public notice, and creating a demand for good British honey, combined with the idea of encouraging persons to become bee-keepers. Your correspondents, however, evidently think that the sole aim of exhibitors should be to produce high-class sections. The quantity of honey taken and the profits of bee-keeping are secondary considerations with them (quality is simply a matter of source of supply). Exhibitions are thus to be held for the pleasure of being able to say, "my bees finished their work on this dozen of sections better than yours!"

I consider the suggestion put forward by your correspondent, "G. S. N." (5361, page 513), the best made so far, and should very much like to see it carried out. I believe it would give the public a chance to inspect good samples of honey, and assist in forming a judgment when purchasing from tradesmen. I have been surprised at the general ignorance of what good honey is, even by persons living in the country, and as to flavour, very few have any notion of how it should taste. Living close to one of the most popular seaside resorts, and selling large quantities of honey retail every year, I have exceptional opportunities of hearing opinions. Some people buy section honey as a curiosity to show their friends; others refuse "that sugary stuff" when granulated extracted honey is offered; some decline liquid honey, and ask for granulated. Opinions also vary as to colour, while a great many only know honey as a remedy for sore throats.

My average yield per hive this year was 47 lb., and I have more than doubled my number of stocks by swarms and "casts." In fact, swarming has been rather a nuisance this year with me. One of my swarms actually sent out a "virgin swarm." A rare thing with frame hives.

My swarms realise from 10s. to 15s. each, according to size, and honey brings me from 10d. to 1s. per lb. retail.

We have this year had the fields nearly

white with clover-bloom as late as mid-August.

My best hive yielded 84 lb., against 124 lb. taken from a swarm in 1902. Several apiarists in this part have done far better than myself, one living within a quarter of a mile of me having taken 124 lb. from one stock; another, who started with a three-frame nucleus, netting 134 lb. of honey, and a swarm, to boot. The smallest take I know of from a frame-hive here is 20 lb. of surplus, and I think if the hon. secretaries of the several bee-keeping associations were to obtain results from their various members, the results would surprise everyone in the bee-keeping world, even in this so-called worst season known.

Mr. Woodley having pointed out this district, as one of the best, I may say that while there are good returns from a certain number of hives, there might be considerable disappointment if it were doubly stocked.

I need scarcely say that I have sold all my honey, and hope to do even better in the coming season.—W. H. HALES.

PRICE OF HONEY.

CRITICISING THE CRITICS.

[5381.] Your correspondent, Mr. "W. Patchett," after devoting the greater part of his communication to pouring contumely on those who differ from him, and trying to prove that my opinions are nonsense, says on page 516 that he would be "sorry to write discourteously of any man for expressing his opinions, but 'D. C.' *should treat the subject fairly.*" (This fairness is to include selling my honey at "3d. per lb.") He will then "be pleased to treat my views with respect." I think he would have expressed himself more fully had he left out the words I have italicised, or applied the same to himself.

Earlier on in the discussion (page 473) Mr. Patchett questions my business ability, and objects to selling honey at 3d. per lb. I am therefore blessed both ways. However, rather than speak of other people's opinions as "nonsense," I would either criticise them with courtesy or treat them with silent contempt. Obviously, "W. P." and myself again differ, for I thought I was giving "fair" and *unbiassed* treatment, and had not the monopoly of "nonsense."

One could wish that those who criticise letters in your pages would read the latter more carefully before replying thereto, and not attribute statements to others which have never been made. If "W. P." desires to dabble in statistics let him show what per cent. profit the average bee-keeper makes; bearing in mind that the majority are unable to bestow the "good management" that is necessary. I have never heard of a bee-keeper getting rich by keeping bees in this or any other country, and yet there is no more profitable and convenient hobby, on the whole, than bee-keeping. There are thousands of bee-keepers among us who from an outlay of not more than 16s. have taken 16 lb. and upwards of honey per hive every year, and have, after the first season, considered it as *all profit.*

With regard to the prices I quoted for hives and bees, by referring to B.B.J. of April and May last year, it will be seen that stocks could be bought for 10s. 6d. and swarms from 6s. So much, then, for my "misleading and unfair estimates."

I do not think that honey will remain a luxury in this country so far as prices are concerned; nor has cheap foreign honey extinguished the foreign bee-keeper.

Your correspondent, "Northerner" (page 504), has thought fit to assume that I am not a honey producer at all. Well, I now possess sixteen stocks in frame hives, and have taken close on 100 lb. from one hive every season so far, while my neighbour averages 10 lb. per hive. It is also recorded in back numbers of B.B.J. that a June swarm produced over 2 cwt., and a stock over 3 cwt. of honey in one and the same season. Should each individual sell at different prices?

Your various correspondents seem to argue that if by "good management" a large quantity of honey can be got, let the price come down, even to 3d. per lb. While others, whose policy is of the "dog and the shadow" kind, say, "don't flood the market; hold out for a big price" (2s. 6d. per lb., for instance). Result is they have to keep it, and finally dispose of it at "treacle" price, and perhaps give up bee-keeping in disgust because "bees don't pay." This may be "nonsense," but it is the conclusion drawn from the criticisms of your correspondents by—DESUNT CÆTERA, Lincs., January 4.

Queries and Replies.

[3301.] *Use of Zinc Runners.*—Although I have taken an interest in bees for at least fifteen years, not until now have I had a chance of keeping them, and I now possess two stocks. I have made several hives to the pattern given by Mr. Cowan in "Guide Book," and have used zinc for the metal runners. Having since heard that zinc is dangerous, and will form an active poison both for the bees and for any one who partakes of honey that has been in contact with it, I ask, is this so, and would you advise its removal and strong tin used in its stead? I intend to try and have five

stocks by the time the season begins, and being also an amateur photographer, will try and send you a photo of my "Home of the Honey Bee" at end of next season. I send name for reference, and sign—A BEGINNER, Stratford-on-Avon, January 2.

REPLY.—There is no appreciable risk in using zinc for the runners on which frames hang, consequently there is no need for removal. At the same time it may be said that tin is almost invariably used by appliance makers for runners in hives.

[3302] *A Beginner's Start with Bees.*—In October last I purchased of a gardener who was leaving this district a straw skep and bees, together with an empty frame-hive, the bees of which died out two years ago. At the time of purchase I knew little or nothing of bees, but having had my interest awakened by the gardener's story of bee-life, and having a suitable place on the side of a hill to keep them, I became a bee-owner. I sent for the "Guide Book," and being enlightened by its pages, I watched the bees with great interest. During the mild weather here in October and November I noticed that the bees were flying freely, and that several of them were busy carrying in light-yellow pollen. I rather wondered at this, for I understood from the B.B.J., which I now take regularly, that bees should be safely "wintered" by the end of September or beginning of October. Mid-November, therefore, seemed to be very late for the bees to be "gathering." The skep and bees also, when lifted, seemed lighter than they should be, though I was assured that no honey had been taken from the bees; so I obtained a 5 lb. cake of candy and put on top of the hive, covering all with warm sacking and sheet iron to keep off rain. Since then no bees have appeared, and they have been left entirely alone. I am, however, anxious to know:—1. If the gathering seen was evidence of the existence of the queen bee, and also if the 5 lb. of candy will be sufficient for their needs until the spring? 2. Where is the best place to buy white clover seed? I must tell you that the interesting accounts of my, may I say now, "brother" bee-keepers' experiences seen in the pages of the B.B.J. are of increasing pleasure to me, and like Mr. Geo. Dow at the commencement of his bee-keeping experiences, I have now the "bee fever," and am anxiously awaiting the coming season, which I trust will bring back smiles to the faces of all bee-keepers. 3. I enclose part of comb found in the frame-hive, and will be grateful if you can say whether it has been affected with foul brood, and if so, what steps I should take to disinfect and prepare the frame-hive for use in anticipation of a swarm from the skep next summer? I may say that on the floor-board of the frame-hive appear numerous black specks or deposits, probably by the bees that occupied it. Wishing our Editors a Happy and Prosperous New Year.—A. O. HUGHES, "Glenbrook," South Wales, January 3.

REPLY.—1. Pollen-gathering under the circumstances detailed is an almost certain sign that the stock is not queenless. With regard to candy given, you must not forget that some inspection will be required at intervals to see that the bees are feeding on it during the close time of winter. It not unfrequently happens that bees will die of famine with a cake of candy overhead. 2. Any seedsman will supply white clover seed. 3. The comb sent shows no sign of disease, but it is infested with wax-moth. It should all be cut out of frames and melted down for wax.

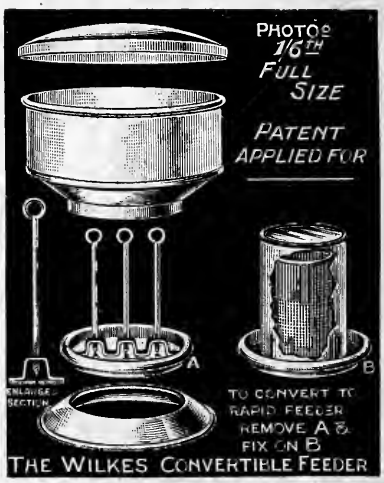
NOVELTIES FOR 1904.

THE WILKES CONVERTIBLE FEEDER (PATENTED).

FOR SLOW AND RAPID FEEDING.

The novelty referred to below was shown at the conversazione of the B.B.K.A. in October last, and was favourably commented on at the time. It has since been patented. Regarding its merits, the inventor writes as follows:—

The old-fashioned bottle-feeder has long



been regarded by bee-keepers, including myself, as a necessary evil, and this evil I have endeavoured to do away with. The illustration above represents an entirely new departure in feeders, combining in means of giving food rapidly and of slow and continuous feeding for stimulating Queens to lay in spring and autumn. This feeder is made of tin, and consists of 5 parts, viz., the lid, syrup tank, slow-feeder A, rapid-feeder B, and base. The

lid is domed, and fits on the *outside* of tank, and therefore does not become fixed with syrup. The tank holds one quart of food, and is filled from the top without removal from hive. It has stamped ¼-pint marks on inside, thus enabling the operator to see at a glance at what rate the food is being taken down, and ensure the beneficial effects of proper stimulative feeding, which must be *continuous, not spasmodic.* The slow-feeding cap. A is of spun tin, and so carefully made that it fits perfectly on the tank, and thus prevents leakage. It is pierced with three small feed-holes, and is fitted with three looped screw valves, the tops reaching above syrup and the bottoms pointed, so that when screwed down the supply is completely cut off. By means of these screw-valves an operator can regulate the supply to a nicety, allowing any quantity from ⅛th to 1 pint of food if desired to pass through in 48 hours. If syrup should crystallise the holes can be instantly opened again by screwing down the screws. If desired a piece of muslin can be placed on underside of cap, the flange fitting in base keeping it in position, this giving a warm foothold for the bees while feeding.

The rapid-feeding cap B is designed in order to make feeder convertible from slow to rapid feeding. By removing cap A and substituting B simply lift off tank and cap A and place lid dome-side down on same to keep bees in; fit cap B on tank and replace it on base.

The base is made to fit both caps, and is wide enough to allow bees from five frames to feed. All parts are made exactly alike, and are interchangeable. The above feeders have been successfully tested during spring and autumn, 1903, in the apiary of the inventor, the bees having increased rapidly by its use.

HONEY-BEES IN WINTER.

The honey-bees are now in the middle of their winter torpor, and death-like silence reigns in the hive. Their bodily functions are not entirely suspended, but that they are nearly so may be judged from the fact that the daily consumption of honey during the winter months by a strong colony of bees, numbering from thirty to fifty thousand members, is only about 1¼ oz. At the onset of the cold weather, the bees cluster together in disc-shaped masses in the spaces between the perpendicular slabs of comb, each bee having its head under the hinder part of the one above it, thus maintaining the warmth necessary for their existence. "Those nearest the honey" (writes an authority) "take it out of the cells, and hand it down to those below them, and these in turn pass it on to the others, until all are satisfied. As soon as the honey-cells next to the first row of bees are exhausted, the whole cluster moves up until the top is reached." It is usual to allow about two square feet of sealed stores (honey or syrup made from sugar) for the bees' winter requirements, and in order to permit of the insects getting from one comb to another without having to pass round the cold ends, and so lose warmth, the thoughtful apiarist, when preparing his stocks for the winter, cuts what are known as "winter passages," one in the centre of each comb. These passages, or holes, are about an inch in diameter, and are a great convenience to the bees. If the passages are not cut, and the weather be unusually severe, the bees, rather than break up the cluster, not infrequently die of starvation.

In modern hives the combs are built in movable wooden frames, and by the use of these frames, it is, of course, possible to vary the width of the spaces between them. When at the end of September the bee-keeper "winters" his colonies, he generally doubles the ordinary summer space, and so, by enabling the bees to cluster in larger numbers, increases their warmth. In addition to this, he also places across the tops of the frames two or three lengths of wood, by means of which the top covering, or "quilt," as it is technically called, is raised about an inch, and a passage-way made for the bees over the top of the combs. Even here his care does not end, for he warmly packs the spaces between the hive proper and the outer casing with chaff, cork-dust, carpet, or paper torn into small pieces, his object being to reduce the escape of the precious warmth to the minimum. If, despite these efforts, the temperature in the clusters falls lower than about 65 degrees, the bees in the upper part of the mass begin to vibrate their wings rapidly, which has the effect of sending down warm currents of air to those at the bottom. This activity, however, means an increase of wear and tear of tissue, and consequently a greater consumption of food; it also, if kept up for a considerable length of time, brings about a heavy rate of mortality, for the life of a bee is in direct proportion to the amount of work it does—a statement which is strikingly borne out by the fact that during its ceaseless activity in summer the bee literally wears out its life in six weeks.

So long as cold weather continues the bees remain in their clusters, but on mild days some of the younger and more vigorous ones venture out for a fly, prudently keeping within a short distance of the hive. When snow is on the ground, and the strong sunlight is reflected into the hive, the bees, attracted by the bright light, will sometimes come out in large numbers, notwithstanding that the temperature of the outer air may be too low to permit of exercise being taken in safety. So it happens that hundreds of bees, becoming numbed with the cold, fall to the ground, to

rise no more. To avoid this, many bee-keepers shade the entrances to the hives in such a manner as to keep out the enticing, but fatal, light; while others, by using what are known as "zig-zag passages," effectually exclude the whole of the light.

It is always somewhat dangerous to make an examination of the hives in winter, and no experienced bee-keeper does so unless there be some urgent reason, but beginners, in their natural anxiety to ascertain that all is going on well, are sometimes unwise enough to disturb their stocks by removing the warm quilts and taking a peep inside the hive. This interference arouses the bees, who leave the clusters, many of them flying out of the hive. A novice who had so acted told the writer that hundreds of his bees fell to the ground chilled. He stood contemplating their bodies in sorrowful silence, and then, thinking that warmth might restore their lost consciousness, he picked up a number of them and put them in a large match-box, placing the box when full into his trousers pocket. The warmth of his body soon revived the bees, who began to buzz most merrily. Taking them home, he endeavoured to transfer the now angry prisoners from the match-box to a larger receptacle, with disastrous consequences, for the bees escaped, savagely attacking the household cat, and stinging their saviour for his pains! When snow is on the ground, and food is scarce, the bold and ingenious blue-tit will often repair to an apiary, and, sitting on the alighting-board, tap the hive with his beak. This usually brings a curious bee to the entrance, who, before he has time to give the alarm, is snapped up by the bird. When these birds are very troublesome their ravages are prevented by the placing of a net over the hives. Mice, too, taking advantage of the torpor of the bees, sometimes find their way into their citadel, and partake of a dainty meal of comb and honey.—*The Globe*, Dec. 19, 1903.

WEATHER REPORT.

WESTBOURNE, SUSSEX,
December, 1903.

Rainfall, 2·47 in.
Heaviest fall, ·50, on 12th.
Rain fell on 14 days.
Below average, ·34 in.
Sunshine, 49·1 hours.
Brightest day, 2nd, 5·5 hours.
Sunless days, 12.
Below average, 10·8 hours.
Maximum temperature, 52°, on 9th.
Minimum temperature, 21°, on 3rd.
Minimum on grass 16°, on 3rd.
Frosty nights, 10.
Mean maximum, 42·6°.
Mean minimum, 34·3°.
Mean temperature, 38·4°.
Above average, 0·6°.
Maximum barometer, 30·36°, on 22nd.
Minimum barometer, 29·20°, on 10th.

L. B. BIRKETT.

WEATHER REPORT

FOR THE YEAR 1903.

WESTBOURNE, SUSSEX.

Rainfall, 41·20 in.
Heaviest fall 2·37 on September 4.
Rain fell on 188 days (above average 10).
Above average, 12·64 in.
Sunshine, 1,761·1 hours.
Brightest day, May 26, 15 hours.
Sunless days, 74 (above average 15).
Below average, 90 1
Maximum temperature, 79·5° on June 1.
Minimum temperature. 21° on December 3.
Minimum on grass, 16° on December 3.
Frosty nights, 74 (above average 15).
Mean temperature, 49·3°.
Above average, 1·5°.
Maximum barometer, 30·75" on February 10.
Minimum barometer, 28·90° on March 2.

L. B. BIRKETT.

Notices to Correspondents & Inquirers.

"BRUM" (King's Norton).—*Motoring Bees in the U.S.A.*—1. From whatever source the press-cutting enclosed may have been obtained, it may be set down as an American "yarn," and our bee friends across the Atlantic would be not a little surprised if we did not treat it as such, so far as regards reprinting it in the B.B.J. It obviously contains just the *modicum* of truth required by a go-ahead reporter on which to build a mountain of fiction. 2. *Experts' Certificates.*—The particulars required can only be obtained from the Secretary of the B.B.K.A., Mr. Edwin H. Young, 12, Hanover-square, London.

F. W. MOORE (Sompting).— *1st and 2nd Class Exams. for Experts' Diplomas.* — For details apply to Mr. E. H. Young, as above.

C. R. WYMER (Greenwich).—*Bee Candy.*— Your sample is very good; smooth in grain and "buttery" when scraped. A little more continuous stirring, perhaps, while cooling off, would make it perfect.

A. REID (Ross-shire, N.B.).—*Queries and Replies.*—If our correspondent has any comment to make, or information to give, that will add to the use or value of editorial answers given in reply to queries, we will be very pleased to publish the same, notwithstanding the fact of its being "at variance with editorial opinion," as stated. On the other hand, it must be borne in mind that the "Query and Reply" column is the direct means of communication between readers and editors, the latter holding themselves responsible for all replies given to questions put.

Editorial, Notices, &c.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of December, 1903, was £940.—From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

TOTAL HONEY IMPORTS

FOR THE YEAR 1903.

January	... value	...	£928
February	... ,,	...	706
March	... ,,	...	2,850
April	... ,,	...	2,637
May	... ,,	...	3,362
June	... ,,	...	5,732
July	... ,,	...	5,716
August	... ,,	...	3,433
September	... ,,	...	1,095
October	... ,,	...	1,894
November	... ,,	...	1,056
December	... ,,	...	940
Total value		...	£30,349

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 10, *Buckingham-street, Strand, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 10, *Buckingham-street, Strand, London, W.C.*"

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[5,382.] *Shows and Showing.*—This subject appears to hold the field at the end of one year and the opening of another, and as there are many prominent showmen whose opinions will be of value, I trust they do not mean to let the opportunity pass without giving their views on the question.

"Mr. Weston's further views" on page 3 are fair comment on the quotations from various letters which have appeared recently in your pages. In my own case on page 493, I was speaking generally and not in the personal sense, when comparing the product of the hive with live stock—and when asserting that "First prize honey was not procurable every year" I was simply referring to bee-keepers generally and left out the exceptional cases of men who are regular exhibitors at shows, because winners' names appear in the past volumes of our journals, and these records will point to the few "exceptions"; but when Mr. Weston assumes that the producer of the dozen prize sections possesses only the single dozen staged of that quality, he is misled by the briefness of my "note." To make the matter clear take my trophy at the Dairy Show as an instance; the sections in it were equal in quality to my one dozen prize lot, and the purchaser of the trophy ordered a double quantity to the 1 cwt. staged. This parcel we dispatched before the week was out, and several other orders for sections were filled a few days afterwards, and others since, while I have now on hand a supply for my regular customers to carry on till June—all of first grade. Again, my exhibit at the "Royal" Show was honey of the previous year, and unless we get a very early season I shall (D.V.) stage some of 1903 honey at "Park Royal" in the current year. Regarding what I said on page 512, my fear was for others who, like Mr. Loveday, work their apiaries for extracted honey, and only reserve a few hives for sections. For myself, I hope—weather permitting — to have a further plentiful supply of prize sections for 1904 as of yore.

If Mr. Weston has had any practical experience of "Shows and Showing," apart from honey and beeswax, the same questions will arise, and the self-same difficulties have to be surmounted, because the prizes are won year after year by the few enterprising showmen who do their best to win, be it in vegetables, flowers, or poultry, and animals canine or feline, or the greater agricultural products. My immediate neighbours, who every year carry off the bulk of the prizes at our annual big show at Newbury, have already started growing the prize-winning vegetables, and one (a noted breeder of poultry) has been "sweeping the board" at the local shows, in one instance taking 1st, 2nd, and v.h.c. in a single class!

Should Mr. Weston or the Council of the B.B.K.A. wish to reach and encourage the disappointed exhibitor, why not try the experiment of a few consolation prizes? These generally bring a happy smile on the faces of disappointed ones who are behind in the race. Consolation prizes may prove stepping-stones to further effort at bee and honey shows, but to consider that the "open class" at county shows should be suppressed entirely will not help very much, in my opinion, to re-

suscitate the showmen of the past. I say this in view of the fact that most county shows have open classes, county classes, and classes for those who "keep less than, say, five hives." The "open class" is intended to attract honey from all parts of the kingdom, in order to educate the less prominent bee-keeper on the quality of honey somewhat above his mark, and teach him or her the best way of putting up for market or for the show-bench. As regards the prizes for dark honey, I quite agree with Mr. Weston in his comments thereon, but unless exhibitors of the latter attended and could thus compare different samples no doubt another year the entry list will contain exhibits of similar colour and quality. In his closing paragraph on page 4, Mr. Weston evidently intends his remarks as a reply to my note on the failure of our associations to reach the class for whose betterment they were primarily established; and to inculcate humane methods of obtaining the produce of the hive. I have before me as I write county reports of twenty years ago, and each states: "That its object is particularly to better the condition of the agricultural labouring classes." This very laudable object of the bee-keepers' associations has practically failed from some cause, whether it be, as Mr. Weston surmises, overcrowding in wretched dwellings, with but little of the modern conveniences of life, or, as I think, the migratory life so many have to endure now in comparison with their forbears. As secretary of a benefit society, I am in quarterly correspondence with a good number of our members, and many "moves" occur every year, and as Overseer and Guardian I am cognisant with the continual moves that are yearly taking place amongst the labouring classes; then during the last twenty years I have many times been asked to buy out the bees because the owners were going to move Londonwards, and could not take their bees.—W. Woodley, Beedon, Newbury.

PREVENTING AFTER-SWARMS.

[5,383.] Mr. S. Darlington (5376), whose question I have pleasure in answering, may certainly do as he proposes. The scheme to which he refers was advocated as enabling a busy man to manage a small apiary profitably, and at the least possible expenditure of time and trouble. Suppose that spring finds him with his fixed number of winter hives more or less in a line, and that hives F. and G. stand four yards apart from each other. A swarm (f.) leaves F. and is finally placed on the further side of G. Then G. swarms, and the swarm (g.) is finally placed just on the further side of F., for when there is a group of hives a comparatively slight separation is enough to puzzle the bees. Nothing would be gained by shifting the swarms back again in autumn. The old queen of each swarm is removed, and the bees strengthen the nearest colony under its young queen.

If G. does not swarm F. gets no addition of bees, but it has a young queen and should be strong enough in itself to winter well and thrive next season. Before joining G. and (f.) the less desirable of their two queens must be removed, or both queens having been deposed new blood may be introduced by the purchase of a cheap autumn queen from a trustworthy dealer.

The great object is to keep the apiary rigidly to a fixed number of hives, all at full profit. Swarms are dealt with if they issue but are not encouraged, so that less trouble results than when artificial swarming is practised, either in the orthodox fashion or by "shaking" as now recommended on the other side of the Atlantic, Moreover, under the plan here advocated, each swarm ensures the rearing of a young queen under natural swarming conditions, the best obtainable in the absence of special queen rearing, an undertaking beyond the scope of one busy man.

Referring again to Mr. Darlington's question, it is quite possible to change the position of a hive in one long move and with but small loss of bees, especially in late summer when the weather is still warm and little honey is being brought in. Having made the move in the evening a long strip of glass should be placed in front of the entrance, so that on trying to leave the hive a bee will be stopped and compelled to pass along to one end of the slip before it can fly. A leafy bough should be placed in front of the hive so as to alter its appearance and offer an additional impediment. By these means the attention of every flying bee will be called to the change of position, and most of them will return straight to the new home. Some will seek the old spot, where strengthened by others coming straight from the hive they will circle about for hours, alighting at intervals, but by nightfall nearly all will be housed. This may go on for some days, and a few bees may be lost; most probably the aged and the least vigorous, and not enough in number to affect the welfare of the colony.—H. J. O. Walker (Lt.-Col.), Budleigh Salterton, January 9.

MORE POINTS IN BEE-KEEPING.

WARM HIVES AND CLOSE-ENDED FRAMES.

[5,384.] Acting on your permission, as expressed on page 10 last week, I now send you some comments on the above subjects. On page 489 of B.B.J. for December 3, Mr. R. Hoffmann relates some of his "Bee Ex-

periences," and solicits information on several points. He wishes to know of a hive which secures warmth for the bees, and is at the same time in keeping with the surroundings of a gentleman's garden. It is pleasant to hear of those able and willing to consider the comfort of their bee-houses, as they do their stables, kennels, etc. It comes in refreshing contrast to using "Quaker Oats" and other old boxes, and miraculously converting them into economical (?) receptacles for bees! To many of us "a thing of beauty is a joy for ever," and I think that bee-keepers of Mr. Hoffman's stamp should receive encouragement, as well as those less favourably situated, and whose chief consideration must of necessity be cheapness. I see in this week's JOURNAL that my esteemed friend and countryman, D. M. M., Banff, refers on page 1 last week to Mr. Hoffmann's query. I imagine it would have been more satisfactory if my good friend had seen his way to recommend one of the dozen "absolutely best hives" likely to suit Mr. Hoffmann. I don't think the latter would have run any risk in taking the advice of one so well qualified to judge.

As indicated in the editorial reply on page 490, well-made, as well as elegant, hives can no doubt be had from the principal hive-makers. I also admit that "the best packing for bees is *bees*, when they are in hives, with thin single walls that admit of no other kind of packing; but for bees in properly-constructed hives the best packing, in my opinion, is a material best calculated to maintain an equal temperature in the hive under all conditions. Mr. Hoffmann is not alone in recognising the value of warm hives. I think that all will admit that other things being equal the warmest hive is the best hive. The point therefore is what constitutes a warm hive? In stating my opinion, I give the results of a long and varied experience, dating back to a time when there was no B.B.J., and when I had to strike out a course for myself; and being naturally inclined that way, I acquired the habit of thinking out and experimenting on different methods of bee-keeping, and I fear the habit has now become chronic. I hope then, that, although I may differ even from our editors on some points, we will agree to differ. You will make some allowance for an old self-taught, and it may be "self-conceited," bee-keeper. Our first differing, then, comes on your reply to Query 3294, in B.J. of December 17, 1903, page 509, on "Close-Ended Frames in Hives." The writer, "J. H.," wants a warm hive, and evidently thinks that close-ended frames have something to do with it. I was rather surprised at your unsparing denunciations of the close-ended frame; but can quite understand it if your experience was gained in working with cold hives, in which the sticking and binding effects of the propolis could not be overcome.

About thirty years ago the same objection, along with that of "bee-crushing," was urged against these frames. My only remembrance of that controversy is that from it I date my conversion from open to close ended frames. A good deal could be said about other good features, and about the different makes, of this frame, but I have already taken up too much of your valuable space. Meantime, I will conclude by making the following assertions: 1st, A hive fitted with close-ended frames makes a warmer domicile for bees than the same hive would be fitted with the ordinary standard frame. 2nd, In a properly-constructed hive the ill-effects of propolism is neutralised, so that the frames can be as easily separated (if not more so) than with open ends in an ordinary hive. 3rd, The arrangement which overcomes the propolising trouble also prevents the liability to crush the bees. 4th, This arrangement also makes the warmest hive warmer still, and I maintain makes the most reliable, the most endurable, the most economical, and the "best packing for bees."—ALEX. REID, Ballsom, Muir of Ord, N.B.

TEACHING BEE-KEEPING IN NATAL.

[5385.] I have pleasure in sending you enclosed prospectus of the Horticultural and Training College for Ladies at Pinetown, Natal, South Africa. It will show you I have made a little progress with my bees since the time I proposed bringing "a queen egg" out with me to Natal. I have six hives here and four at Pinetown. I hope to start a number at Pinetown after January. It is open country there; here we have near neighbours. The rains have been very late this year, and I had to feed the bees over the end of the dry season. (They fly, of course, all the year round; we never have frost.) I had some very pretty sections of comb honey last year, some filled with pure orange-blossom honey as white as snow. Then I had some thinner sections, darker honey, from the mango trees. Many people I showed the sections to here said it was the first honey they had seen "made to order;" and one lady insisted it had been made by machinery! I was surprised, though I have not seen section honey in the store windows; there is always a class for honey in section at the principal agricultural shows.

I was deeply grieved lately to hear of the death of my friend Mr. David Raitt, of Blairgowrie. I had a letter from him just a week or two before. Surely it must have been very sudden! It seems so sad. He

was so young and bright, so hopeful of the future. Sadder still to think of his young wife and children left behind.—MARY RITCHIE, Trevose, Bellair, Natal, December, 1903.

[The above communication may recall to some B.B.J. readers the interesting letters from Miss Ritchie detailing her experience with bees in Natal which appeared in the volume for 1902. We are very pleased to hear of her subsequent progress in bee-craft, as evidenced in the prospectus of the college for ladies mentioned above. Miss Ritchie will no doubt make an excellent teacher for the apicultural branch of the college, and we wish her success in her new sphere of work.—EDS.]

PRICE OF HONEY.

CRITICISING THE CRITICS.

[5386.] Your correspondent "Desunt Cætera" in his last letter (5381, page 7) wishes that those who criticise letters in your pages would read them more carefully before replying thereto. Being myself one of the critics, I would like to point out to him where he alone is the transgressor in this respect. He says that I "thought fit to assume that he was no honey producer at all," whereas the words that I used (on page 504) were, "I venture to say also that your anonymous correspondent is no large producer of honey, or he would do the toning down himself." I therefore consider this an altogether unfair thing on "Desunt's" part, specially for one who reads things so carefully, when he informs us on page 497 that he is a honey producer. A man possessing sixteen hives cannot be called a "large producer of honey," which goes to prove that my surmise was correct. Again, he mixes matters up when he says, "I do not think that honey will remain a luxury in this country so far as prices are concerned, nor has cheap foreign honey extinguished the foreign bee-keeper." But no foreign honey was alluded to by me; only that honey in the comb would remain a luxury until our honey flow was extended from six weeks to six months. The contrast between the foreigner and the British bee-keeper is apparent to all who carefully read their BEE JOURNAL, both as to quantity produced, quality, and prices for his honey, and he is not likely to ruin us just yet. But I again ask, can "Desunt Cætera" point out where any correspondent has said that "if by good management a large quantity of honey can be got, let the price come down even to 3d. per lb." ? This is another result of over-careful reading. What was really meant by the various opinions expressed was that it is an impossibility with the best of management to secure anything like the quantity he states, year after year. A careful reading of the letter on page 497 will bring to light several statements of a more or less contradictory nature. I see Mr. W. Patchett on page 473 also points out a similar mistake of our critic, who accuses Mr. Patchett of questioning his business abilities. But after reading the letter I fail to see where the accusation comes in, even in the final words, where Mr. Patchett says, "If they gave name and address we might find they were either not bee-keepers at all or very unbusinesslike ones." More errors could be cited, but these suffice, and go to prove, to my mind at least, that your correspondent, "Desunt Cætera," is both a careless reader and an unfair critic.—NORTHERNER, Yorks, January 11.

CHEAP HOME-MADE HIVES.

[5387.] Would it be too much to ask our friend, Mr. C. H. Tomlinson for a few particulars of his hives shown in "Homes of the Honey Bee" this week, which we are told cost for timber only 1s. 3d. Like Mr. T., I, too, am an amateur carpenter and make my own hives, but have not been able to make them so low as 1s. 3d. each for timber, as stated on page 5. Perhaps Mr. Tomlinson would be kind enough to describe a little more fully the design which he says he "cribbed," and also the kind of wood he used, for the benefit of your readers, including myself. Thanking Mr. Tomlinson in anticipation, and wishing all bee-keepers a Happy and Prosperous New Year. I send name for reference and sign,—A COTSWOLD BEE-KEEPER, Chipping Norton, Oxon, January 8.

SHOWS AND SHOWING.

[5388.] I have to thank Mr. Hales for the particulars of his honey-yield on page 6. The district in which his bees are located must be a bee-keeper's El Dorado. His deductions regarding my opinion of exhibitions, however, rival those of Sherlock Holmes, and have just about as much foundation in fact. I trust Mr. Hales will do better at the 1904 shows; there is "always room at the top," and such splendid bees, and fields nearly white with clover till mid-August, ought to spell success; but there must be a "missing link" somewhere. If those "hawked" exhibits still bar the way to the coveted card, may I suggest the "not for competition" class? It has a charm all its own, at least so I am told.—A. W. WEATHERHOGG, Willoughton, Lincs., January 9.

(*Correspondence coinntued on page* 16.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

It would surely never occur to a casual observer that the almost youthful-looking apiarian seen in the bee-garden pictured below was an octogenarian, and had kept bees for over 50 years. But it is so, and, in view of the fact, we congratulate Mr. Turney on his bee enthusiasm and hope it will continue for all the years he appears to have before him judging from his form and face. For the rest, the following notes kindly sent by the local Hon. Sec. M. B. K. A., speak for themselves:—

"I have pleasure in sending you a photograph and a few particulars of Mr. Turney, one of our members, who has been an enthusiastic bee-keeper for over 50 years. Although now 83 years of age, he takes as much interest as ever in his favourite hobby, and, as a close inspection of his hives will show, invents many little improvements to add to the comfort and well-being of his bees.

"He tells with pride of taking 40 lbs of honey from a skep 45 years ago and selling it at 1s. 4d. per lb., and of being sent for by the Duke of Cambridge at Canterbury in 1864, on which occasion he had supplied a large bell-jar of honey for the officers' mess.

"He commenced bee-keeping in 1851, and soon began to try to devise some means for making the bees build straight combs, for, as we know, in those days foundation was not much known in England, if at all. He first tried putting strips of wood across the hive, but the bees built their combs cross-ways. One night, when thinking over the matter in bed, the idea of putting triangular strips of wood, with the angle downwards, occurred to him, and a few days later he had the delight of seeing combs built properly from the angle. A specimen bar is in my possession.

"All the hives shown in the illustration are the work of his own hands; and I can say from experience that they are as useful as they are good-looking, for they all fit accurately. Many a person has received a helping hand with his bees from Mr. Turney; but, with increasing years, he hardly feels able now to attend to any other hives than his own.

MR THOS. L. TURNEY'S APIARY, WEALDSTONE, MIDDLESEX.

"Mr. Turney has been associated with bees almost all his life, for his mother kept them in skeps, and at ten years of age he used to hive the swarms. In those days the bees were invariably consigned to the sulphur-pit each autumn; but our old friend is glad to be able to say that he has never once followed that cruel plan. Forty or fifty years ago, before he had heard of 'driving,' he asked a man, who was about to kill the bees for the honey, to allow him to drive them and to leave the honey. For the novelty of the thing the man consented, and Mr. Turney got the bees for his trouble in 'driving' them.

"One useful feature of his hives made close upon fifty years ago was having glass at each end of the hive, so that the work

could be easily seen. Another plan devised by him was to elongate a hive to any extent he wished, though the *modus operandi* would no doubt be considered too troublesome in these days of rapid manipulation."

CORRESPONDENCE.

(*Continued from page* 14.)

NATURE STUDY EXHIBITION.

TEACHING BEE-KEEPING TO CHILDREN.

[5389.] It may interest your readers to know that bee-keeping is being taught in two girls' schools in Clapham by a lady who holds the B.B.K.A.'s First Class certificate.

At the Nature Study Exhibition held recently in London, this lady gained a medal for her school exhibit, and for her method of teaching bee-keeping to children. Her success in her examinations and in teaching she attributes very largely to the excellent training she received at the Horticultural College, Swanley, Kent.—AMAPIS, Croydon, January 6.

HONEY WITHOUT BEES!

[5390.] I should be glad to know whether it is legal to describe as honey any production otherwise than the nectar gathered by bees from the flowers? For example, would it be legal to describe glucose as "glucose honey" or treacle as "treacle honey"? If it be not legal, I think it is the duty of bee-keepers to take such action as will at once cause the withdrawal of the following advertisement, headed: "Honey without Bees," and as a sub-head, "A New Food Delicacy." The advertisement reads as follows:—

> "Modern laboratory research has given us a process whereby it is possible to make honey from cereals, without the aid of chemicals of any sort, or the addition of sugar, by a process essentially identical with that by which honey is manufactured by plants, ready to be stored by the clever little bee.
>
> "Malt honey, as now sold by us, is a food superior to honey, being free from pollen, fragments of flowers, dust, and other foreign matter, and can be used without injurious effects by anyone.
>
> "It is a flesh-former, being ready digested starch in the form of Grape Sugar. Put up in lever-lid tins, at 10½d. per lb. Can be obtained from our agents, or direct from . . . . ."

I omit name, etc., of firm, as it would be a free advertisement for them. I should say myself that it is no more legal to add the word "honey" to a chemical production than to add the word "butter" to margarine; and if it be not legal, we must combine to suppress this misuse of the word. To my mind it should be one of the duties of the British Bee-keepers' Association to keep a watch on all infringements of the Food and Drugs Act in so far as they affect the bee-keeping industry. If if be legal to add the word "honey" to any sweet concoction, then good-bye to our prosperity. I think the present case should be taken up. If necessary, I am sure that bee-keepers will subscribe for the purpose, but it should not be necessary to do more than to call the attention of the Food and Drugs inspector to the matter. I send name, etc., and sign myself A BRITISH BEE, Truro, January 11.

BEE STINGS.

[5391.] I have often been told by "bee-men" that bee stings are a sure cure for rheumatism, but in order to cure the affected part it is necessary to be stung at least twelve times to the inch! I should imagine the remedy to be worse than the disease if this is so, to say nothing of the inconvenience of the operation; then fancy the swelling afterwards! That brings me to another point: I wonder if anything does prevent the after-swelling? Personally, I don't mind the pain, you can hide that; but it is awkward, to say the least of it, when an angry bee introduces his weapon into the side of your nose, and it needs all one's persuasive powers to convince one's friends who "wouldn't keep bees because they sting so" that you "fell down and knocked it"! But, seriously, can any bee-keeping friend suggest a preventive or remedy? I send name for reference, and sign—STUNG, Birmingham, January 6.

THE HARDY BEE.

THE QUESTION OF WARM HIVES.

[5392]. In these days of providing warm hives for bees, I thought the following personal experience of my own might be of interest to some readers of the B.B.J., so send you particulars:—On Saturday, the 2nd inst., I was asked to buy several stocks of bees, and, on going to have a look at them, I found the poor bees had been sadly neglected. One lot—a swarm of last summer—had been hived into a rough box, and there it stood on the bare ground, just as it was placed when hived. In fact, the box was propped up, 5 or 6 in. in front, with a piece of brick, in order to allow the bees to run in, and the bee-keeper (?) had not even taken away the brick to lower the box down!

An old rotten bag had been put over the box for a cover, and so it was left since the hiving day. The bees had built their combs below the bottom of box almost down to the bare ground. We had a week of frost before I saw the bees, so I quite expected to find them all dead and the combs mouldy. Instead of which, the bees were strong in numbers and "very much alive," as I soon found out on lifting the box. This seems the more remarkable as the open or raised side of the box faced due north.—H. SIMMONDS, Herts, January 9.

MARKING PRIZE EXHIBITS.

[5393.] I have abeen reading with considerable interest the discussion relating to above, but have not seen the following suggestion mentioned by any one, viz., to mark the exhibits themselves—the sections with some indelible ink, and the extracted honey with a diamond on the glass containing same—with the name and address of the exhibitor, which I think would prevent same being again exhibited by a different exhibitor. I write the above with great diffidence, but I have been struck by the point several times on reading the various letters printed in connection with above.—LEX, Leicestershire.

RELIQUEFYING HONEY.

VALUABLE EXPERIMENTS IN AMERICA.

In the current issue of *Gleanings* (American) appears a lengthy extract from an official bulletin (No. 48) of the Agricultural Experiment Station of the University of Arizona on the subject of bee-products. The bulk of the subject-matter is naturally of less value to bee-keepers on this side of the Atlantic, where the bee-forage differs so much from that in the U.S.A., but the experiments in reliquefying honey which has become solid by granulation are of general use and interest to bee-keepers everywhere, from the business point of view, as will be seen from the extracts given below:—

The selling qualities of our Arizona honeys, such as consistence, colour, flavour, and aroma, vary considerably with both source and treatment. Wild-flower honeys, especially from mesquite and the acacias, are generally regarded as the best, being very white and of finest flavour and aroma. These honeys solidify very quickly when extracted from the comb. The alfalfa honey of this region is usually darker than the above, or the alfalfa honey gathered in more northern localities. Its flavour and aroma are very good, and it solidifies less quickly and completely after extraction than wild-flower honey.

Consumers, for conventional reasons, usually prefer their honey in syrup form; and in order to liquefy the solid extracted article, the five-gallon cans in which it is stored are, as a rule, placed in boiling water, requiring several hours to liquefy. This process darkens and alters the flavour of the honey, materially injuring its quality. In order to determine how to liquefy honey with the least injury, a five-gallon sample of solid mesquite honey was thoroughly mixed and divided into quart Mason jars. These samples were then placed in vessels of water heated to various temperatures, and kept there no longer than was necessary to reduce them to the liquid condition. They were then judged and analysed, with a result indicating that the lowest temperature employed (130 degrees Fahrenheit) affects the qualities of the honey least. Liquefaction at this temperature, however, was very slow, was not complete in six hours, and was not permanent. At boiling temperature, on the other hand, the solid honey was rendered very fluid in three hours, its colour and taste being damaged, and its chemical composition changed. The lowest temperature at which quick and permanent (for four months) liquefaction was secured with least damage to the honey was 160 degrees; 150 degrees give better results for quality, but the honey did not remain liquid so long.

These statements show that the prevailing practice of liquefying five-gallon cans of granulated honey by putting them into boiling water is damaging to the quality, and, presumably, to the market value of the product. As long as customers demand their honey in liquid condition, it should be converted in a bath of not to exceed 160 degrees Fahrenheit; and the lower the temperature employed the better. The necessity of doing this, however, is not entirely apparent. Pure extracted honey in this region always granulates, particularly in cool weather; and the granulated condition is evidence of its purity. The usual adulterants, sugar syrup and glucose, tend to keep honey in liquid form. This fact being known, customers, especially where honey is liable to adulteration, should prefer their honey, evidently pure, in solid form. The marketing of solid honey requires packages which permit free access to the contents. Barrels for bulk and wide-mouthed cans and jars of the style now much used to contain semi-liquid products would be suitable for the marketing of solid honey, excepting in the latter case that the cost would prohibit. For retailing small amounts, a recent device consists of a bag of stout paraffined paper, into which the newly extracted honey is run and allowed to solidify. Such a package is cheap, con-

venient to use, and capable of artistic decoration pleasing to the prospective customer. Commercially, it would seem that there is as good reason that honey worth five cents a pound wholesale should be bagged for retail trade as that rolled oats, for instance, at about the same price, should be similarly put up for sale. The use of bags is perhaps more possible here than elsewhere, because of the unusually solid character of our honey.

The by-products of honey are of considerable importance. Wax is sold in considerable quantities, at about thirty cents a pound; and some bee-keepers work up their waste and washings into vinegar. Theoretically, one pound of average honey worth five cents should ferment to form about two gallons of 3 per cent. vinegar, wholesaling for about ten cents a gallon. However, the ordinary fermenting vat employed, consisting of an alcohol barrel with open bung, requires as long as two years to complete the process, and the cost and care of barrels, delay in returns, and limited local market discourage manufacture.

The crude honey obtained by means of the solar extractor from cappings and waste is usually fed back to the bees. On account of the excessive heat in these extractors (as high as 220 degrees Fahrenheit noted by one observer) this honey is usually scorched, and unfit for sale.

Queries and Replies.

[3303.] *Transferring to Clean Hives in Spring.*—I purpose in the coming spring to transfer my eighteen stocks of bees to perfectly clean hives. I have four surplus hives, all of which have been thoroughly disinfected and painted inside and out. The plan I propose is to transfer four stocks each week, and would like your advice on the following points: 1. Would the paint on walls and floor-boards of hives have any injurious effect on the bees after having been painted a week before using? 2. Would you recommend ordinary paint for exterior and white enamel inside, as the latter would harden much quicker and is supposed to be inodorous? 3. Would any syrup that might drop on floor-boards in spring when stimulating be deleterious to bees eating same after having come in contact with the paint? Thanking you for reply, I send name, etc., and subscribe myself.—QUEEN BEE, Sutton, Surrey, January 8.

REPLY.—1. If plenty of "driers" be used in paint and the hives exposed to the air for a week, they will not injure bees in any way. 2. We should use good white-lead paint for both inside and outside of hives. 3. No; not in the least injurious.

[3304.] *Reliquifying Granulated Comb-Honey.*—Will you kindly inform me through the columns of your valuable BEE JOURNAL the best and quickest mode of extracting shallow frames of honey which has now become granulated? I could not attend to extracting when I took it off the hives and you can imagine the job I have got on hand! I have sixty or seventy frames to extract and I expect it will necessitate the melting of combs. But please give me the particulars of how it has to be done most quickly and effectually. Thanking you in anticipation.—W. H. BUCK, Dawley, January 9.

REPLY.—There is no quicker or better method than slicing the combs up into a bowl or earthenware vessel which latter can be immersed in a pan of water and made sufficiently hot to melt the wax and reliquefy the honey. The pan is then withdrawn from the fire, and when cold the wax may be lifted off in a solid cake. The water should not be allowed to boil or the flavour of the honey will be deteriorated. About 160 deg. Fahrenheit is high enough.

[3305.] *Moving Hives in Winter.*—I shall be much obliged if you could tell me through the BRITISH BEE JOURNAL if I could safely remove my hives from here, say, to Kent; and if so, what will be the best way of moving them? They are in wooden hives, and I am anxious to keep the bees. They are very strong and healthy, and if I was to sell them I should probably not get as much for them as the hives cost. Sorry to trouble you, but I do not know what to do.—CAROLINA WHITE, Teignmouth, Devon.

REPLY.—If properly packed for transit by rail the hives will travel safely in winter, but it will be very risky, indeed, if not securely prepared for transit. You should, by all means, get help from an experienced bee-keeper in the task of preparing for so long a journey as that proposed.

[3306.] *Bee-ways in Sections.*—I have on hand about 500 or 600 sections, four-bee way, 4½in. by 4½in. by 1½in. The generality of sections I find are 2in. wide and these when placed in rack with separators allow at least ⅜in. bee-way. On the other hand the 1½in. pattern when placed in racks with separators allows but ¼in. bee-way. I therefore ask—1. Is this latter width of bee-way sufficient? Although only a beginner I venture the opinion it is not. 2. If I am correct in my surmise, how can I use the separators? Best wishes for a

Prosperous New Year for the B.B.J.—W. Brown, Burwash, Sussex, January 9.

Reply.—1. We cannot quite follow your description of bee-way spaces, sections, racks, and separators, but you may take it for granted that bees must have a passage-way of nearly a ¼in. clear or they cannot enter sections at all, therefore, if the separator cuts the ¼in. space into halves at sides of sections, the bees cannot possibly pass through. 2. If you could send us on a section and a separator in the flat it would enable us to understand and reply to your query. Otherwise we cannot give a satisfactory reply.

Echoes from the Hives.

Pilsby, Chesterfield, January 9.—A few hours' sunshine to-day brought the bees out for the first flight in 1904, after lying by for five weeks. How the rain does keep coming down, and what work it makes with hives that are not well painted! I thought mine were weather-proof last summer, but the continued wet is finding its way into some of them, and the new year, so far, is no improvement on the old one. — Tom Sleight.

HONEY VINEGAR.

MADE FROM HONEY AND WATER.

If you simply mix the honey and water so that an egg will fairly float at the top, showing about the size of a dime out of water, it may be sufficient or it may not, according to the amount of ferment contained in the honey, and also according to the temperature after the mixture is made. To make vinegar there must be an alcoholic fermentation previous to the acetic, and the more thorough the first fermentation is the better the acetic fermentation will be.

In order to hasten the fermentation, it is best to add some fresh fruit-juice to your honey water. Then, if the liquid is cold, or if the temperature is low, it is best to heat the liquid till it reaches about 90 or 100 degrees. If it is kept warm, the fermentation will soon begin, and if it remains exposed to the air it will be but a short time till the sour taste begins to show.

We never allow any honey to go to waste. The washing of the cappings in a well-regulated apiary will furnish enough vinegar for two or three families, even if only a few hundred pounds of honey have been uncapped. In a large apiary the cappings are first drained through the uncapping-can in a warm room until they seem perfectly dry, and even then several barrels of sweet liquid can be secured from the washing of the cappings of fifteen or twenty thousand pounds of honey. We figure that each thousand pounds of honey extracted gives us about 15 lb. of beeswax from the cappings, and, perhaps, 5 gallons of sweet water fit to make good vinegar. So the apiarist should never render his beeswax till it has been thoroughly washed.

Vinegar that will not sour may lack two or three things which are all needed. Sufficient warmth, as stated above. If all other requirements are right, it will still be impossible for vinegar to sour if the weather is cold. A good place to keep a gallon of vinegar is right behind the kitchen stove. In a few days a jug full of mild vinegar will become very sour. Do not cork it tight, but cover the mouth with a cork. A wide-mouth jar covered with a cloth is still better.

Air, that is, oxygen, is needed. The making of vinegar is simply the oxidizing of the sugar contained in the liquid. No change may take place unless air is, or has been, supplied. For that reason the vineyardist keeps his barrels of wine full, and bunged tightly, so that no air may reach the wine. If, perchance, a barrel remains open, he soon has a barrel of vinegar instead of a barrel of wine, and the better the wine has been the better the vinegar will be.

Sufficient sweetness is needed. If the directions I give are followed, a good article of vinegar will be produced. If you want to put the honey by weight, put not less than two pounds of honey for each gallon of water. A less quantity may make fair vinegar, but it is much easier to weaken your vinegar if too strong, by the addition of a little water when you wish to use it, than to strengthen it by adding more honey after it is partly made.

A very good inducement for any sweet or alcoholic liquid to turn to vinegar is the addition to the liquid of what is called "vinegar - mother"—the viscous, ropy matter which is usually found in a barrel of good vinegar. This "vinegar-mother" contains the principal ingredients that go to make vinegar, and although it is practically degenerated vinegar, yet it will add strength to the vinegar very promptly.

So, if you happen to have some old vinegar that has been long standing, you soon strengthen your new vinegar by adding a little of this "mother." Do not listen to those who will say that this is a disgusting looking residue. It looks no worse than an oyster does. Vinegar containing this residue is sure to be pure and wholesome. Vinegar made from chemicals does not contain any mother, neither does it contain any living organism.

The more air the vinegar gets at the proper temperatures, the quicker the vinegar is made. Manufacturers of first-class wine-vinegar in Europe often drain their vinegar through a barrel full of shavings slowly, drop by drop, so as to give it a good chance to air. In this way the best vinegar is made.

If you have no fruit-juices to add to your vinegar, a little cider will help to give it a start.—C. P. DADANT, in *American Bee Journal.*

RAINFALL IN 1903.

At Buttermere, in the County of Wilts; Rain gauge :—Diameter of funnel, 5in.; height of top—above ground, 3ft. 6in.; above sea level, 847ft. :—

Month.	Total Depth.	Greatest Fall in Twenty-four Hours.		Number of Days on which ·01 or more fell.
	Inches.	Depth.	Date.	
January	2·81	0·64	4th	17
February	1·49	0·27	26th	13
March	3·80	0·70	23rd	22
April	3·21	0·71	26th	10
May	5·25	0·73	5th	16
June	5·67	1·28	13th	8
July	2·74	0·65	25th	12
August	5·39	0·72	11th	19
September ..	2·26	0·59	11th	12
October	9·15	1·72	11th	28
November ..	2·18	0·98	27th	11
December ..	3·86	0·76	12th	13
Total ..	47·81			181

W. E. BURKITT, Buttermere Rectory, Hungerford.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

A BEGINNER (Warwick).—Suspected Foul-Brood.—The season is now quite unsuitable for doing anything in the shape of treating the stock suspected. Leave it alone till the bees begin to fly in spring; then send us a piece of comb showing signs of disease and we will report. Your fears may be entirely groundless.

F. CHARLES (Bucks).—Home-Made Hives.—1. If you can handle joiners' tools fairly well, and are carefully accurate in working, there is no reason why home-made hives should not answer every purpose of successful bee-keeping. The main point is to have all loose parts connected with hives, surplus-chambers, and outer-cases interchangeable. On the other hand, we strongly advise you to buy machine-made frames, sections, etc., from a reliable dealer. Many successful bee-men make their own hives, as may be frequently seen in the illustrations of "Homes of the Honey Bee."

PRACTICAL EXPERIENCE (North Bucks).—"Fads" and Theories.—We cannot insert letters—even when a *nom de plume* is used—which are in themselves simply free advertisements. The proper plan for makers of hives or appliances supposed to possess certain merits is to publish particulars of such merits in the advertisement pages, which are open to all who have only legitimate and proper announcements to make. Your system of management may be all you claim for it, and if the pamphlet descriptive of it really possesses merit it will no doubt sell if advertised.

A CORRESPONDENT (T. W.), dating from Hollingbourne, writes :—"Having made an observatory hive of American white wood, I should be much obliged if some of your numerous readers acquainted with the matter would tell me of the best kind of stain or polish for the outside, to give it a good finished appearance, as the hive is a well-made one."

A WELSH BEE-KEEPER (N. Wales).—Melting Down Combs of Granulated Honey.—If quality be good, there is no reason why melting down should render 2½ cwt. of honey, unfit for any but "manufacturing use." If the melting is carefully done, and combs contain no pollen, the honey should be quite suitable for table use, without being of very high quality. If you could send on a small sample we might say if it was worth your while to advertise it for sale. If course it would have to be offered at a low figure.

THOS. FENTON (Herts).—Dealing with Stocks bought in Winter.—On no account do any disturbing of the bees at this season. If you are "assured that they are all right" leave them severely alone till the bees begin to fly freely; then, on a fine day, make the needful examination to make sure that food is not short, but no more till weather allows a full overhaul.

*** We are asked to publish the following, dated Jordanstown, co. Antrim :—"The writer, who has recently left England to reside in co. Antrim, wishes information from a local bee-keeper as to the bee forage of the county, whether the honey harvest is obtained from heather, or what source, when the 'glut' usually occurs, etc. Any help will much oblige a B. J. reader since '88."

Editorial, Notices, &c.

M. ED. BERTRAND AND THE *REVUE INTERNATIONALE*.

It is with sincere regret and sorrow that we have to announce that the *Revue Internationale* closes its useful career after an existence of twenty-five years. We have the last number before us in which M. Ed. Bertrand, the venerated originator and editor of the paper, takes leave of his readers. Many papers are started, and after a short existence disappear without being missed; but with respect to the *Revue Internationale*, we venture to think the regret will be universal, and the void created will be long felt. All bee-keepers acquainted with the French language read with interest what appeared in this, the leading expositor of the movable-comb system on the Continent of Europe, and looked forward to its appearance monthly, and they will keenly feel the loss of it. M. Ed. Bertrand at the age of seventy-two has well earned his retirement, and has the satisfaction of seeing the methods he has so ardently advocated pretty generally adopted, not only in his own native country, but also in France and other countries.

Ed. Bertrand was born in 1832 in Geneva, where he resided until he reached the age of nineteen years. Later he went into business in Paris, where he remained until 1872, and was there all through the siege. The anxiety he experienced during this time and the trying events connected with the insurrection of the Commune in 1871 told seriously upon his health and induced him to retire to the property he purchased on Lac Leman at Nyon. Here he became possessed of two skeps of bees with straw caps, and commenced bee-keeping with these. The first two or three years of his novitiate were passed in trials and failures without ever harvesting a single pound of honey. He tried, one after another, hives with supers, such as were advocated at the time, always with unsatisfactory results. The neighbourhood at Nyon is not very favourable for bee-keeping, and no apiary had succeeded there before him. The honey-flow is of even shorter duration than in other places, and it was therefore absolutely necessary to have strong colonies, an impossibility with the small hives he was using. He became acquainted with the works of G. de Layens, *Elevage des Abeilles*, and C. Dadant, *Petit Cours d'Apiculture*. The methods there described were a revelation to him, and in 1877, for the first time, he obtained a good harvest of honey from a "Layens" hive. The following year he changed all his hives, making some of the Layens type, and in others adopting that of Dadant, and established an apiary at Bex. In 1880 he started another apiary at Allevays in the Jura, which we described in B.B.J. for 1883 (page 96). Here he put up an equal number of Layens and Dadant hives for the purpose of comparing results. This apiary, which later he gave over to an assistant, always yielded good returns of honey in spite of foul brood, which decimated it, but which was stamped out. Not only was its first cost of 2,500 francs quickly returned, but every year a profit was derived and divided equally between M. Bertrand and his assistant. Latterly he had given up this apiary and also discarded the Layens hive, retaining the Dadant as the one most suitable for profitable bee-keeping. In 1876, when the Société Romande d'Apiculture was started, M. Bertrand was elected secretary, and on several occasions he has been elected president of this society—a post which can only be held by the same person—for two years consecutively. He was also until quite recently librarian and treasurer.

In 1879, the society having recognised the advisability of having an organ which would place its members in direct communication with each other, and inform them of the advances made in bee-keeping, M. Bertrand offered to edit the journal, on condition that he was the sole manager and undertook to bear all costs. He supplied the members with the journal at the reduced rate of three francs, whereas the ordinary subscription was four francs. At this time the leading French journal was strenuously opposed to the new methods, and M. Bertrand had to submit to much unfavourable criticism and abuse from an Italian journal conducted by Giotto Ulivi and several of his partisans in France. However, so well was M. Bertrand's journal received that it was evident it filled a void, and at the end of two years the *Bulletin d'Apiculture pour la Suisse Romande* had sufficient subscribers to pay its cost of production, and these so rapidly increased abroad, especially in France, that it was considered advisable to change its title to *Revue Internationale d'Apiculture*. There was no doubt that this high-class journal was the most practical and best in the French language, and was therefore eagerly sought after by advancing bee-keepers.

M. Bertrand, it was known, was not only a practical but a successful bee-keeper, and his advice could always be relied upon. Having also successfully fought foul brood he was able to give such advice as has been the means of curing many diseased apiaries.

Being acquainted with several languages

M. Bertrand has kept his readers informed of the progress being made in England, America, Germany, and Italy. It was with this object in view that the "British Bee-keeper's Guide Book" and "The Honey Bee" were translated by him into French, as was also that most complete work on "Foul Brood of Bees" by F. C. Harrison.

In addition to editing and publishing the *Revue Internationale*, M. Bertrand has also published several practical works, such as *La Routine et les Méthodes modernes, premières notions d'Apiculture*, in 1882; *Description des meilleures Ruches; Conseils et Notions à l'usage des Commençants;* and in 1883, *Calendrier de l'Apiculture*. The three last were later combined in one volume, entitled *La Conduite du Rucher*, which, after several revisions, is now in its eighth edition. So popular and trustworthy is this work considered that it has been translated, and is now published in six languages. M. Bertrand was so enthusiastic in advancing modern methods that, not content with editing the journal, he was indefatigable in giving instruction, and from 1884 to 1887 every evening gave a course of lectures and practical instruction at his apiary. This course lasted six days, and was open free of charge to all. Only failing health caused him reluctantly to relinquish them. He was also appointed lecturer on apiculture at the Government Agricultural Institute at Lausanne.

We can ourselves, from a pretty good acquaintance with the country, testify to the change that has taken place and the progress that has been made in bee-keeping during M. Bertrand's activity; but let his own words speak for themselves. This is what he says in his valedictory address: "If I take a retrospective glance of the work of the 'Revue' during its twenty-five years of existence, I notice that at its commencement things were very different from what they are to-day; bee-keeping in movable-comb hives was carried on by very few, not only in Switzerland, but also in France and Belgium. In France, the journal having the most extensive circulation fought desperately against the new methods; to-day, this superiority is no longer contested except by a few retarders; they are advocated in France by some twenty journals and bulletins of societies, and by a dozen in Belgium."

M. Bertrand, in looking backward, has the satisfaction of knowing that his labours have not been in vain, but have been crowned with a success that few have the privilege of realising. His genial manner, persevering industry, and indefatigable zeal made him esteemed by all who knew him, and it is entirely to him that the French-speaking portion of Switzerland owes the present position it holds with regard to bee-keeping. Our acquaintance with M. Bertrand commenced in 1883, and has become an intimate friendship, which has grown with years, and which we trust nothing but death will sever; and although we shall be sorry to be without the welcome monthly journal, we cannot but rejoice that our friend has so successfully accomplished his work, and that he has now obtained his well-earned rest and relief from the worries and anxieties inseparable from the duties of an editor. We heartily thank M. Bertrand for what he has done towards advancing bee-keeping, and hope he may continue for many years to enjoy his quiet retreat at Nyon.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The Editors of the 'British Bee Journal,' 10, *Buckingham-street, Strand, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* i"The Manager, 'British Bee Journal' *Office*, 10, *Buckingham-street, Strand, London, W.C.*"

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

[5394.] *Sweet Girl Graduates.* — Last year again from a recent list of "passes," I note that the fair sex is in the majority, securing third-class expert certificates to the number of forty-six to forty obtained by males. It would be interesting to know if a fair proportion of these carry their studies further than this lower examination demands. How many even attempt the second class, and have any attained the much-coveted first class? In a recent issue three ladies obtained the second-class certificate and eight gentlemen reached that desirable goal. I think bee-keepers may rejoice over the interest taken in the pursuit by women at these examinations at Lady Warwick's College, the Swanley Apiary, and, indeed, all over the country, as in many cases they prove the best bee man of the family. This is no new feature in bee-keeping, as Dr. Warder remarked nearly 200 years ago that the bees were committed for the most part of the protection of the good woman of

the house and her daughters ; and he draws a humorous (but sad) picture of the manner in which they carried out bee manipulations then. Needless to say such doings would not carry points in the examination for experts' certificates in the twentieth century. "The good woman and her two daughters held a council of war, and pronounced a harsh and ungrateful sentence against the bees. One runs for the spade, to dig the hole in the ground, another prepared some cleft sticks, a third the fatal brimstone matches to put in them. Thus, all things being prepared for an assault of their rich but defenceless castle, they are taken by storm, their city plundered, and the inhabitants all slain by fire." The fair maidens who now sit for a "pass" have learned a new and better way of making their bees pay. Each, I trust, with a high ideal planted in her mind, will go homeward to be a centre of light and leading, so that in time we may have the whole island dotted with these enlightened lady apiarists, who will do much good in disseminating all that is latest and best in modern apiculture. Precept is a powerful agent in lighting up the dark places of our cult, but example is far more potent in clearing away the mists of ignorance. It is not verbal or written instruction which tells most, and I would rely greatly on prejudice being brushed aside by the powerful influence for good of the example of these lady experts.

"Married" Hives.—It is not from design, but by a pure "concatenation of fortuitous circumstances" that the subject of marriage follows that of girl graduates. I was taken by the quaintness of the phrase heading this "note," and more so as it rather aptly described the result of the antiquated practice which gave it rise as well as the particular union I am about to describe. It was common over half a century ago (and I believe some surviving beekeepers have in their youth carried out what they then considered a humane improvement on the cruel holocaust of the sulphur pit) to subject two condemned lots of bees to the baneful influence of puffball or fungus, whereby, when it was dried and set aflame, the bees were stupefied, the two lots combined, and the amalgamated colony retained. Of the two hives the one was "taken" and the other left, its combs and honey all remaining in possession of the "married" lot. On the strength of having become one and indivisible it now deserved the name, as undoubtedly they were so closely linked that no man could put them asunder. In spite of its being claimed in its favour that this custom saved bee life I am glad it has fallen into disuse. My married hives are of a different type and managed on a much more humane and modern plan. They are simply two casts not over strong considered as single entities, or two or three pound lots of driven bees, housed each on five or six frames in a common hive on the "Wells" plan, with a perforated dummy between. The mutual warmth generated by close clustering in the contracted space makes them practically one lot ; so that, considering their strength when winter packed, they come out in spring bright and lively, having not only survived, but done well, when, as disunited lots, they would have had little or no chance of pulling through in separate domiciles. The secret of success seems to be that the heat so easily generated and maintained by the combined lots uses up less caloric during the rigid reign of King Frost and consequently less food is consumed, less tissue worn out, and so bees come out in spring younger and more vigorous than if housed as separate lots. Though two, they are as regards food consumption and heat production almost one. The system is well worth a trial and has several points to recommend it, the principal being perhaps the preservation of surplus queen for use if the necessity should arise in early spring.

Crawshaw's Device.—This neat and ingenious contrivance figured on page 477 of B.J. of November 26 strikes me as a very suitable appliance for the purpose for which it was designed, as it lends itself better than any other device I have seen to the neat and smooth levelling up of the quilts when winter packing, so as to conserve the winter heat. I would recommend a trial of it to all those who go in for arranging winter passages for their bees over the tops of frames. I have myself discarded the practice for a good few years and have not yet seen cause to revert to it. I simply leave all the brace combs on tops of frames after taking off supers and find them sufficient for the purpose. In the case of a swarm, however, of the current season, a stock not supered, or one otherwise shorn of above adornments, some device may be necessary, and it undoubtedly frequently saves the life of a stock in a season of prolonged inactivity, when bees, by the severity of the weather, are hindered from shifting their cluster at the bottom of the frames owing to the excessive cold. Then this winter passage proves a ready means of access in the warmest part of the hive, where the bees may safely uncluster, and make a short journey to reach their food. This latest device has the recommendation of being cheap and easily made even by an amateur, and should prove thoroughly effective.

The Future Outlook.—I am so much of an optimist that I have every confidence in looking forward hopefully to the season so soon to open. Perhaps I have no other but a

woman's reason for such anticipations—"I think it so because I think it so!"—but all the bee men I encounter share the same feeling, and are prepared to see not only a silver but a golden lining behind the cloud which for the two bypast seasons has hung black as a pall over Beedom; and not only over us but over fruit-growers, farmers, and many others who fared even worse than we. Every colony pulled through the winter will be a most valuable asset this year; but many will require careful watching from the first dawn of spring. Wherever necessary then, feed, feed! unite where needed; watch carefully for all indications of queenlessness, sure to be common; and keep a lynx eye for all signs of disease, certain to be prevalent after last two seasons: and then commit the future to a wiser than thyself.—D. M. M., Banff.

SHOWS AND SHOWING.

BUYING PRIZE EXHIBITS.

[5395.] I have read with considerable interest the letters in B.B.J, under the above heading during the last few weeks. As one who pays great attention to what concerns honey shows, I beg to say that, in my opinion, it is not the quality of the exhibits one has to meet, but the quantity we are asked to send for a single exhibit, that prevents a great many from showing outside their own county. Could we not have smaller exhibits than those of one dozen sections or jars of extracted honey? What with "getting up" the exhibit, journey to station, and railway carriage to and from the show, it is no light task to compete in three or four classes at such a show as the "Royal," which comes at a date when most bee-keepers have but little really good honey on hand. Why not alter it to 6 lb. instead of 12 lb. respectively? I should not be surprised to see the entries doubled if this were done. It would certainly give smaller bee-keepers a chance. What say other bee-keepers in this matter?

Mr. Weston's motion of buying up first prize exhibits will, I trust, never come into force. We want to win in the best company if we win at all. I value my prize cards that are marked "*Open* Class," but little value can be attached to, or interest taken in, competitions when we know some of the best honey is barred.

Suppose one like myself, either by good fortune or management, gets sixteen or eighteen extra good sections, and sends one dozen to a show, and takes first prize with them. In this case my sections are taken from me, and I have not enough left to make another exhibit. Thus my "showing" is then over for the season. If, however, it was returned to me not too badly damaged, perhaps I could have made up another exhibition dozen, and in that way be equal to those who have several dozens to choose from. To me the plan seems to hit the small producer extremely hard, and will, in my opinion, tend to decrease rather than increase the entries.

Mr. Woodley, on page 11 of B.J. last week, suggests "consolation prizes for disappointed exhibitors," while Mr. Weatherhogg, on page 14, proposes "not for competition classes." I suggest, in lieu of class for dark honey, two new classes, one for sections and one for extracted honey, "for novices who have never won a prize outside their own county." This plan could easily be tried at the four big London shows in September and October. New names would in this way appear in the prize list, and having once won at London, it would spur them on to greater efforts. I have at present never won outside my county, but I intend to try, and hope to take my failures manfully. But if the committees of honey shows will ask smaller exhibits, they will have less trouble in staging, an increase in entries, and earn the gratitude of other exhibitors besides myself. WALTER TURNER, Brent Eleigh, Lavenham, Suffolk, January 15.

CHEAP HOME-MADE HIVES.

[5396.] If your correspondent, "Cotswold Bee-keeper," who asks me for information on home-made hives, will refer to B.B.J. for January 29, 1903, page 47, he will find a reply to his question with regard to hives costing 1s. 3d. each for timber. There are many kinds of used boxes much more suitable for hive-making than bacon boxes, these being difficult to thoroughly cleanse, and I am now using new timber only. — C. H. TOMLINSON, Hollywood, Birmingham, January 16.

(*Correspondence continued on page* 26.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

In Mr. Talbot, whose apiary is seen on next page, we have a bee-keeping postmaster, not the only one among B.B.J. readers who fill similar positions in the public service. Indeed, the rural post office seems to "fit in" admirably with bee-work, without interfering with the ordinary duties of such an office. We therefore trust the following "notes" will arouse interest among those who may have the same opportunities of keeping a few hives as our friend:—

"My first attack of 'bee-fever' came after visiting a cottager's apiary of some

twenty skeps, and it was very nearly as a skeppist that I began myself. Wishing, however, to read up the subject, before making a start, I fortunately heard of the 'Guide Book,' and after reading and re-reading it with increased interest, I made a beginning in May, 1901, with a 'guinea outfit' bought from a well-known manufacturer, and a swarm from my skeppist friend. I obtained no honey the first summer, but became so deeply interested in the pursuit that in the winter following I made a couple of hives, each to hold twelve frames. Then in the spring of 1902 I bought for a sovereign, from my cottager bee-man, two stocks in skeps for transferring to my new hives. This, under the ever prompt advice given in the B.B.J., was successfully carried out by placing each skep over ten frames with full sheets of foundation. All went well and the bees worked down nicely into lowest hive, and made it their brood nest. The skeps were removed in August, resulting in my getting 36 lb. of surplus from the two. My first stock, through inexperience, was badly managed, for when all seemed going on well in the sections, the bees swarmed, but were allowed to remain in the hiving skep till September! Of course after the swarm issued, work ceased in the super and no honey was obtained from the hive, but as a consolation the swarm, when driven from the skep in the autumn, gave 20 lb. This year, when a hive swarmed, I removed four frames with brood and bees, and queen-cells, and stood them in a nucleus box alongside. After cutting out remaining queen-cells, the parent hive was filled up with frames fitted with full sheets of foundation, and the swarm returned in the evening, when work in the supers was resumed right merrily. I have thus raised young queens, and united the nuclei to the stocks from which they emanated. It is here worthy of remark that only those hives swarmed which were being worked for sections. As regards hives, I am strongly in favour of one holding twelve or fifteen frames for this district, with the outer wall flush with top of the frames, those dimensions giving plenty of room for comfortable manipulations. With respect to the size of the frames, I tried a stock with frames 9½ by 13½, but, although this hive appeared greatly superior in the quantity of bees in April, yet the result in surplus has been decidedly disappointing, most of the honey appearing to be stored below. I shall, therefore, 'double' this lot over 'Standards' next spring, and so transfer and bring them into line with my other 'plant.'

"My little garden apiary, some five minutes' walk from home, is within the shadow of Romford Church, so that I am not too favourably situated. Nevertheless, my take of 125 lb., or an average per hive of 25 lb., in my first working season, is, I venture to say, decidedly encouraging, and I look forward with keen anticipatory pleasure to 1904, which I trust will bring better luck to many of the 'brethren' than has 1903."

MR. R. J. TALBOT'S APIARY, ROMFORD, ESSEX.

CORRESPONDENCE.

(*Continued from page* 24.)

SHOWS AND SHOWING.

[5397.] I do not think Mr. Weatherhogg, in his reply on page 14, treats our friend Mr. Hales quite as fairly as he might have done. Mr. Hales stated on page 507 that "the general public would sooner see an exhibition of honey of the average quality than have the same exhibit (prize) hawked from show to show." I would venture to say that the general public would much rather see a show of the average quality of honey than the "not for competition" class as suggested by Mr. Weatherhogg, unless such class is reserved exclusively for exhibits that have already taken a prize. I ask: Why should exhibits that have already taken a prize be allowed to compete with those that have not done so? The successful exhibitor receives the reward for which he tried, why, then, should he be paid over and over again for the same exhibit? If the exhibitor must hawk his prize exhibits from show to show, let there be a class for such exhibits; and we shall then find out who shows the best produce during the season. The entries for the various shows will then increase and such competitors as Mr. Hales will then have a better and fairer chance of finding the "missing link" mentioned by Mr. Weatherhogg, whose remarks are (to put it mildly) a trifle sarcastic. He would, to my mind, have shown better taste by recommending our friend to try, try, try again, instead of endeavouring to crush him with sarcasm.

I do not know either of the gentlemen referred to, but readers in general will, I fancy, endorse the impressions of Mr. Hales as to the objects of shows and showing, in reference to the suggestions offered by Mr. Weatherhogg, whose prize exhibits must form a veritable El Dorado for him. —E. G. Ive, Ollerton, Notts, January 18.

BEES UNITING OF THEMSELVES.

[5398.] I have been reading your British Bee Journal for some time now, and have got some valuable hints from it. I was wondering if the following would interest some of your readers, as I fancy it is rather an unusual incident. I had a bee-bench on which stood a row of straw skeps, and one morning, to my disappointment, I found that one of them was queenless, as the bees seemed very excited, and were running up and down the face of the hive in great numbers. On going a little nearer I saw the bees running along the edge of the bench in single file, and into the mouth of the next hive, and to my surprise the bees of the latter allowed the queenless strangers to go in quite peaceably. This kept on for a few days, when, as the queenless skep seemed to be deserted, I turned it upside down, meaning to kill the remaining bees, and take the honey. There was only about a handful of bees left, and a drone or two. I managed to get about 40 lb. of honey from the hive that the queenless bees joined. —W. Allen, Oundle, Northants, January 16.

BEE-FORAGE IN CO. ANTRIM.

[5399.] In answer to your Jordanstown correspondent, whose letter appears at the end of page 20 last week, I do not think there is any specially good bee-forage about Jordanstown; but I believe there is some heather in the locality. I have been a bee-keeper here several years, and I have not heard of "one" who goes in for heather-honey or for removing bees to the moors, same as "I have seen" in the North of England.—J. Hamilton, Holywood, Co. Down, January 18.

LOCATING HIVES NEAR BEE-FORAGE.

Some six or eight weeks ago a correspondent wrote me that he had not seen anything from my pen in the "American Bee Journal" of late, and wished I would write again, sending along a question on which he desired my opinion in the paper mentioned. As I was too busy then to answer his questions, and as they would keep, I have deferred the matter till the present time. The question sent in is as follows:

"I must change my abiding place during the coming winter and I desire to locate my apiary about a mile and a half from the thickest pasturage of the vicinity to which I am going; but I am undecided what to do for fear my bees will not do nearly as well as they would if I sacrificed my own convenience and moved right in among the flowers of the best bee-pasturage. What would be the difference, if any, in the quantity of honey gathered from a certain field of clover, basswood, or buckwheat if my apiary is right among the blossoms, or from one to one and a half miles away? Please tell the readers of the 'American Bee Journal' what you think in this matter."

Some claim that a colony whose bees all have travelled one or two miles from home for their stores will soon become depopulated, the result being a half less honey, with very weak colonies in the fall, over what would accrue had the apiary

been located right in the midst of the flowers. Others claim that every young bee that enters upon the service of field-worker must learn where the best forage-grounds are before it can work to the best advantage; while theory claims, in view of the fact that bees do not know instinctively how to go directly to the nectar-bearing flowers in the vicinity of their homes, but must depend upon their smell and an industrious search for profitable honey-gathering, that therefore it stands to reason that less time would be lost in getting the whole force at work on the honey-producing flowers, where the latter are plentiful *very* near the apiary, than would be the case if the pasture were from one to two miles away. Probably no one could give a very definite answer to the question without trying the experiment with a number of colonies right in the midst of the blossoms, and an equal number one or more miles away, for a number of years; and this is something that I have never done, therefore I cannot be considered an authority in this matter. I can only give my experience, which the questioner and others can take for what it is worth.

My experience would indicate that those who argue that bees must be set right down in the very centre of the honey-producing flora do this more from theory than from actual knowledge; for I am led to believe that there would not be enough difference in the results, at the distance named, to pay for moving the apiary up to the bloom during the time of the blooming of the flowers, and back again for the rest of the year. From many times of watching at the top of a hill near my apiary, over which the bees pass, I find that they fly very rapidly when from one-fourth to one-half mile from the apiary, and the exercise seems to be invigorating; and if those who argue depopulation of the hives when the bees have long distances to fly could be here in years when the bees work on basswood from four to eight miles away from home, following the flow back and up to the top of the high hills as the bloom fails here at home, and then further and further away, and see how the honey in the sections grows as if by magic, with hives gaining in number of bees while this work is going on, I think they would incline to the same opinion I do, namely, that the claims which they have been putting forth are only fallacious.

From this experience of mine, and the many proofs given in the back volumes of the different bee-papers, I am convinced that bees go from one to three miles from home for nectar, from choice, during the summer months, during which months the larger part of the storing of honey is done; and if I were in the questioner's place I would not give to the amount of ten dollars in sacrifice in changing a position a mile and a half from the honey-flora to one right in its midst.

A few years ago it rained all through the apple bloom while it was at its height at my home, which is situated in a valley, the rain stopping only about a day before the bloom fell here. At the same time, the bloom was just opening on the hills five miles away and the orchards in the intermediate or intervening space were all the way from just failing in bloom to just opening. The weather now became fine for nectar secretion, and the bees began to roll in the honey, and kept right at it day after day till the bloom failed on the hills, the farthest being eight miles away. And I thought the yield was even greater, if possible, when all bloom was gone up to four miles away, than it was during the first three days when the bloom was nearer the apiary.

Then I have had good crops of buckwheat honey stored when there was not a square rod of buckwheat in sight of the apiary, and not to exceed thirteen acres within the distance stated by the questioner (a mile and a half), while hundreds of acres lay from three to five miles away.

These experiences, together with having tons of basswood honey stored from the top of the heights seven or eight miles away from my apiary (these same being those from which the apple blossom honey was gathered as spoken of above), during the past thirty years, lead me to think that the centre location parties are not entirely sure of the premises they have taken.

Of course, where one could have things just as he would like them, a location in a valley full of honey-producing flora, together with rising hills on either side the same being covered with all manner of nectar-yielding flora clear to their summits, the summit of which would be from one to eight miles away, would be the much-desired location for the person who is to keep bees for a living. But as it is impossible for all to enjoy such a location, and as other environments are likely to enter into any location in which we are placed, or must be placed on account of our own welfare, or the welfare of those whom we love and wish to help to a schooling or a business, or something of the kind, it is well to accept the situation as it comes to us, and not be stampeded from it by the "scare-crow" of the thought that it is positively necessary that flowers must be in abundance right where we are located.—G. M. Doolittle, in "American Bee Journal."

BEE-KEEPING IN CENTRAL SIBERIA.

The following extract from a letter in the *Times* of January 16, written by "An Occasional Correspondent," of the leading journal, is inserted as possessing special interest for bee-keepers:—

"Immediately north of the region of 'steppe borderland' known as Semipalatinsk lies that portion of Siberia embraced by the government of Tomsk. Bounded on the west and north-west by the Akmolinsk territory and the Tobolsk government, and on the east and north-east by Mongolia and the Yeniseisk government, it comprises an area of upwards of 331,000 square miles, or, to give a better idea, is one and a half times as large as France. Through the centre of this province runs the middle link of the great Siberian Railway, and south of the line are situated four of the seven unequal districts into which, for purposes of internal administration, it is divided, known as the Barnaul, Biisk, Kuznetsk, and Zmeinogorsk districts, forming the property of his Imperial Majesty's Cabinet under the name of the Altai mining district. This property, already one of the richest in Siberia, is certain to advance still further in importance, especially when the proposed Tomsk-Tashkent Railway is taken in hand, and merits a few words of description.

The surface of the country is varied, a vast level plain constituting the western and northern portions, while on the east and south-east rise ranges of the Altai mountains. Throughout the low lands the rich black earth, which has proved to be the fertile soil of Siberia, abounds, and, hence, doubtless, the attraction which has brought settlers to these parts in such large numbers during recent years. For some time attempts were made to protect the Altai lands from the intrusion of settlers; but since 1865, when the district was first opened to colonisation, the influx of settlers has steadily increased, as many as 300,000 being said to have settled in the Cabinet lands of his Majesty within the last ten years of the past century.

Agriculture is consequently the predominant occupation of the people, and, though only a fraction of the total arable land is sown, a large surplus of grain is available in normal years for export to Eastern Siberia and other parts of the Empire.

After agriculture the raising of live stock forms an important element in the husbandry of the country, horses, cattle, and sheep being raised in large numbers, especially in the Barnaul and Biisk districts. Bee-keeping, too, is largely practised, enormous quantities of honey and wax being produced in the Biisk and Zmeinogorsk districts, and when travelling through the country I often obtained excellent honey from the villagers. The villages are invariably composed of wooden houses built of rough unsquared logs, moss and earth being forced into the crevices between to keep out cold and damp. I saw the interior of many such dwellings, often spending the night in the house of some villager when travelling, and was struck by the uniformity of their appearance. The rooms, of which there were generally two or three, were always furnished on the most simple plan, a table standing against a bare wall, a few chairs, and a large wooden bed piled with cushions and blankets constituting bed and sitting room while a huge whitewashed brick oven and stove combined monopolised the greater part of the other, which served as kitchen. The walls were seldom adorned with anything beyond an *ikon* and print of the Tsar and Tsarina, and never once did I see a sign of those odds and ends, such as ornaments, pictures, photographs, etc., which make the *lares* and *penates* of an English cottage."

Queries and Replies.

[3307.] *Points in Making the "W.B.C." Hive.*—I received the "Bee-keepers' Note Book" to-day, and am very pleased with it, as it contains just the information I require. However, I should be pleased if you could answer the following questions concerning the "W.B.C." hive. (1) Looking at the elevation on page 61 of "Note Book," I see there is nothing to keep bees from getting into the space between the outer cases and the inner body-box. How do you get over this? (2) Do you fix the inner box containing brood-frames, or does the weight of frames, etc., keep the box solid? (3) What size should the division boards be? Do they fit closely at the sides and bottom, or is there a ¼ in. beeway left below the bottom edge? In the latter case, is there any danger of bees getting up the wrong side of division board? You will recognise by these questions that I am the merest novice. However, with a little help from you, etc., I hope to be as experienced as the rest of my fellow-readers of your grand little papers, so, hoping for a reply to the foregoing questions in the B.B.J., I thank you in anticipation.—FRANK HUBBARD, Leicester, January 16.

REPLY.—1. Our own practice is to use a thin strip of wood as a "bridge-piece" to cover the full width entrance in the busy summer-time, if bees show any disposition

to cluster between the body-box and outer case; but, if work goes on without any such clustering, we prefer a free passage-way into the hive, as giving more free ventilation than when the entrance is bridged over. In packing for winter, however, we take away the bridge-piece and allow a free current of air between the body-box and outer case, as conducing to the health of the bees. 2. An experienced bee-man needs no fixing of the body-box beyond what he does himself when using. On the other hand, it is, we believe, the custom of our best appliance makers to fix the bridge-piece referred to above with screws, and this, while keeping the outer case in its correct position, prevents the cover from being carelessly pushed back so as to close the entrance-way. 3. The division boards, while not tight-fitting, are larger than the standard frame (to be exact, they measure 14 7-16 in. by 8 7-16 in.).

[3308.] *Using Non-Swarming Hives.*—I started bee-keeping last summer with a stock of Carniolans, and am now thinking of making one or two hives, which I hope to fill with bees in some way during the next season.

Having seen the excellent results derived from using a non-swarming hive, which was owned by a bee-keeper who kindly allowed me to assist him with his bees during the late season, I naturally wish to use same on the hives I am making. I should therefore esteem it a great favour if you could give me directions for making same so that I can withdraw the shallow frame box or non-swarming chamber without disturbing the brood chamber. I may say the shallow-frame box I am making measures 17¾ in. by 17¾ in., outside measurement. In using the above-named box, would you have the frames to hang in the same way as those in the brood-nest, or at right angles to same?

In concluding, I add a line to say that I read the JOURNAL with great interest every week, and have access to at least three years' back numbers for perusal. With every wish for a prosperous season to the B.B.J. and its courteous Editors, I send name, etc., for reference, and sign —LEX, Leicestershire, January 12.

REPLY.—To give directions for making a non-swarming chamber of special size, such as you purpose making, would involve more trouble than you imagine. Why not get the measurements from your bee-keeping friend, who will have particulars by him? On the other hand, as you have access to past volumes of B.B.J., reference to page 131 of Vol. XXVIII. will give some particulars of non-swarming shallow-frame box, such as you require, capable of being placed below brood-nest, and withdrawn when needed.

[3309.] *Establishing a Bee-Farm.*—I have been a reader of both your valuable journals for some years, and I have gathered a lot of valuable information from them. I would be much obliged if you would give me your opinion on the following questions in your next issue. How many stocks of bees in frame-hives could an experienced bee-man look after under the circumstances described below? The location is a fruit-growing one, and there is an abundance of white clover from first week in June till third week in July; there is also generally a plentiful supply of wild mustard and a few limes about. The man would devote his whole time to the bees, the production of honey, and making it ready for market. I therefore ask, Do you think such conditions and a pasture as described would be a good place to start a modern bee-farm if laid out on proper lines? There are as yet few bees in the district. 2. Would 200 hives be too many for a man to manage properly and give them all the attention they needed in busy time? I send name and address, but sign myself—BEE-FARMER.

REPLY.—1. The location described would be a very promising one in which to establish an apiary, and a capable man could manage, no doubt, as many as two hundred hives, if no other work were atempted. But we do not advise a venture of that kind in this country; better try a much smaller number and gain experience with them. "Make haste slowly" is a valuable motto for the bee-keeper. 2. No district we know of in England is suitable for locating 200 hives in one spot. Half that number is quite enough, and any further number should be placed in an out-apiary some miles away.

PRESS CUTTING.

OUT OF THE EATER, MEAT.

A correspondent of the Allahabad *Pioneer* writes from Damoh: "An officer in the Forest Department, Central Provinces, whom I have reason to believe, told me the following: In April, perhaps in 1891, he shot a tiger in the Sambalpur District. The wounded animal went into a deep nullah and apparently died very soon. But it was not found till the second day about ten a.m. The skin had so far decomposed as to be ruined, the hair being quite loose, and, of course, the body of the beast was also very far gone. The tiger lay on its side. On the uppermost side was found a newly-made comb made by Apis florea, the small bees which build on branches of trees. The comb was about as

big as two or three fingers and was entirely empty, but the bees on it apparently at work.—*Daily Telegraph.*

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

DESUNT CÆTERA (Lincs.).—Criticising the Critics.—Our correspondent would do well to confine his remarks to matters of such interest as "price of honey," with which he inaugurated the discussion. Our space is too limited for letters which consist mainly of quotations and re-quotations of what has already appeared. Besides, it will only open the way to more repetitions in criticising the critics to continue this particular phase of the discussion, and as there are now matters of general interest for dealing with, we hope it will be plain to all that merely personal arguments may be discontinued without inflicting any hardship on those immediately concerned.

W. B. (Sussex).—Melting down Granulated Honey in Comb.—1. Your method of extracting honey, viz.: "Melting down last year's super-combs by hanging it up in a bag and squeezing out after melting it in dry heat, then taking wax away," is certainly not good bee-keeping. Nor can we quite understand why—after removal of wax—there should be only "a quantity of liquid left behind, very sweet, and of a dark-brown colour," unless the combs were old and contained pollen. In the latter case the pollen had been burnt in the process of melting. If properly melted in moist heat (as advised in reply to 3304, page 18 last week), the honey would be very little damaged in the process. 2. Without seeing a sample of the "dark-brown liquid," we cannot advise with regard to its suitability for feeding bees in spring.

C. C. (Potters Bar).—Making Bee-Candy.—Your sample is rather overboiled and in consequence would become hard after a week or two, and unfit for bees' use in winter. The consistency should be about that of stiff lard, and as nearly smooth in grain as may be. When candy is coarse and hard in grain the bees cast it out in small granules, instead of feeding on it. With more care in boiling and continuous stirring while cooling off, the candy sent would be all right.

S. T. (Chesterfield).—Heather Honey for Showing.—The flavour of sample is very good, as is also the aroma. The only fault is its hard and rather coarse grain, which will tell against it on the show-bench if staged in a strong competition.

M. D. A. (Herts).—Schedules for Honey Shows and Inefficient Judges.—1. The ordinary prize schedule for a small show of four classes would be: (1) Six 1lb. sections of comb honey; (2) six 1lb. jars extracted honey; (3) one, or more, shallow-frame of honey; (4) display of honey, gross weight from 30lb. to 50lb. To make the last-named class read "gross weight not to exceed 112lb., and not less than 14lb.," would puzzle any judge in giving his award, because an exhibit of 112lb. bears little or no comparison to one of 14lb. 2. It is perfectly useless taking trouble to arrange for a honey-section, unless a competent man is selected as judge. Such judging (?) as you mention should be impossible; it is not judging at all but simply fraudulent prize giving. 3. We should hardly like to offer the sum you name as a "fee" for judging.

J. A. RILEY (Whitefield).—Old Bee Books.—We have the edition of Dr. Bevan's work on "The Honey Bee," published in 1838 and dedicated to the late Queen Victoria; but not the earlier one you mention. We will endeavour to learn its value in the book market, and let you know if successful.

A. H. (Wavenden). — Free Advertisements.—We give no "free advertisements," nor do we know of the dealer you name having a patent for the appliance mentioned. Any system of bee-management for which special merit is claimed will have all the publicity an advertisement in our pages can give, and we will be glad to hear from those who have tested it in our correspondence columns, which is the proper medium for communicating matters of use and interest to readers. In the same way, novelties in bee-appliances are described by their inventors in our pages under the heading of "Novelties" for the current year. This is the only form of "free advertisement" our rules allow.

T. PURT (Croydon).—Moths in Hives.—The larvæ sent are not those of the destructive wax-moth known as *Galleria cereana.* Your specimens are larvæ of the smaller moth usually found in the "saw-cut" in top-bars, and not very harmful to bees, as they are easily kept under.

IGNORAMUS (Hants).—Your query will be dealt with fully next week.

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION.

The monthly meeting of the Council was held at 105, Jermyn Street, S.W., on Wednesday, January 20, Mr. T. W. Cowan occupying the chair. There were also present Dr. Elliot, Messrs. W. Broughton Carr, J. B. Lamb, E. D. Till, T. I. Weston, W. F. Reid, F. B. White, and the Secretary. Letters explaining enforced absence were read from Miss Gayton, Colonel Walker, Messrs. R. T. Andrews, H. Jonas, and H. G. Morris.

The minutes of the previous meeting were read and confirmed.

Five new members were elected, viz.: Mr. W. J. Brown, St. Joseph's, Burwash, Sussex; Mr. R. N. Corah, Yarty, King's Norton, Birmingham; Mr. Henry Futter, Black Street, Martham; Miss Jane Loud, Spring Cottage, Kenilworth; Mr. G. H. Sander, The Cottage, Salisbury Road, Bexley, Kent.

The report of the finance committee was presented by Mr. T. I. Weston, and duly approved.

It was resolved that an examination for first-class expert certificates be held in May next, the exact date to be arranged hereafter.

An estimate of the cost of reprinting in pamphlet form Mr. W. H. Harris's articles on the "Educative Influences of Bee-keeping," and subject to a slight alteration in the form of pamphlet, was accepted.

The Secretary reported results of certain inquiries in regard to the proposed re-issue of the Association's diagrams, and it was resolved to make further endeavours to obtain assistance from the Board of Agriculture, and in the meantime to ascertain what alterations or corrections are necessary or desirable in the drawings.

It was decided to ask permission to send two representatives of the Association to give evidence before the Fruit Committee of the Board of Agriculture as to the benefits accruing to fruit-growers from the practice of apiculture.

The Secretary stated that it was desired to get an article for publication in the March issue of the "Journal of the Board of Agriculture" on "Bee-keeping for Small Farmers," and Mr. Carr was asked to write such a paper, and kindly undertook the task.

A letter was read from the Cumberland Bee-keepers' Association urging further agitation for a Foul Brood Act during the coming Session of Parliament, and the Secretary was instructed to reply to the effect that the Council have good reasons for knowing that such an Act could not possibly be passed at present, but that County Councils can materially assist in the elimination of foul brood in their several areas by contributions to the local associations, who would thus work through their experts.

Nominations of judges to officiate at the Royal Show in June next were made for approval by the Council of the R.A.S.E.

The next meeting of the Council will take place on Wednesday, February 17.

The attention of the Council having been drawn to a letter in our issue of January 14 (page 16), signed "A British Bee," referring to the legality or otherwise of using the word "Honey" in describing a substance with which the nectar gathered from flowers by the honey-bee has no connection whatever, it was decided to request the Editors of the B.B.J. to inform the writer of the letter in question that the proper course will be to notify the Government Inspector—under the Food and Drugs Act—for the locality, who will take the necessary steps to prevent any infringement of the Act. In response to the above request we are forwarding a copy of this issue to the writer of the letter, signed as stated above.—[EDS.]

*** Several printers' errors having crept into our Senior Editor's leader in last week's issue on M. Ed. Bertrand, we would point out that in first column on page 22 (seventeenth line from top), for "Apiculture" read *Apiculteur*; and twenty-eighth line, for "evening" read *season*; then fourteenth line from bottom of same column, for "this" read *their*.—[EDS.]

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

NOTES BY THE WAY.

[5400.] *Nature Study.*—By this means of teaching we get to the root of the matter and plant seeds of future usefulness in the receptive minds of the children. Then, as time passes and our juvenile bee-keepers leave school, we may hope that the subject will still have enough fascination for some to induce them to continue in the pursuit of knowledge at the continuation classes. Bee-keeping should, I contend, be one of the subjects taught at our night-schools, and with the help of some useful appliances and a few other of the many interesting items which go to make up practical bee-

keeping, a weekly class should go far to maintain the interest of learners and keep up the attendances, which, I am sorry to say, is here in Berks., sadly lacking, so-much-so that our educational committee have notified that, unless the number of pupils is increased, and more regular attendance they will not recognise the school.

Honey without Bees.—In my opinion the stuff mentioned by our friend "British Bee, Truro" (on page 16), should be labelled "Corn Syrup," and I think our B.B.K.A. should call the attention of the inspector of food to the matter, and prevent this corn syrup from being foisted on the public to the loss and detriment of our industry. Surely amongst our many members we have some well enough versed in the law to advise on this matter? The Belgians have recently passed a law making it illegal to apply the word "honey" to any other article than the product of the bee.

Marking Prize Exhibits.—I fear your correspondent "Lex" (page 17) would not prevent fraud by his simple methods of marking. New bands would easily cover the indelible marks on the sections, and new jars would easily send forth extracted honey to another show as the property of another owner. The dishonest exhibitor who means to win on these nefarious lines is not easily daunted by a few difficulties. Mr. Weston's "purchase method" is by far the most effectual bar to further showing, but I do not think that he had this particular phase of the question in view when he launched forth his propositions. I take it, his aim was to create a wider distribution of the honey prizes amongst bee-keepers generally. In this way he hoped to increase the number of entries by inducing a larger number of the craft to become exhibitors, by removing the "deck sweepers," and then, to use his own words, "giving others a chance. Time alone, with his proposals in force will prove if this end is attained. Mr. Weatherhogg in one of his letters reminds bee-keepers who wish to win that "prize-winning sections" require to remain much longer on the hive than those of "commercial quality," and are thus more expensive to produce. I can fully endorse this point, nay, I go further, and assert that one year, although running a hundred hives at the time, I was beaten by one of our Berkshire members who possessed a single stock of bees. This gentleman left his sections on till they were sealed out to the wood in nearly every cell, as was Mr. Weatherhogg's at the Dairy Show last October. I say nothing as to the best quality that was staged (though I have my own opinion on that point); but I do assert that the judging leaned towards the sections containing 18 ozs. of honey, rather than by testing the honey in the comb as to flavour, consistency, and aroma. Honey. I contend, can no more be judged by appearance only than can a basket of apples—and as some of our more experienced judges seem to have now retired, the whole subject of judging honey—and the best means of doing so will form an interesting discussion for these winter months. The weather lately has not been suitable for a cleansing flight, a few bees have been on the wing when the sun was shining, but no general flight for some time. See that no stocks are starved for want of food, when a cake of good candy will carry them on till more favourable weather prevails.—W. Woodley, Beedon, Newbury.

PREVENTING AFTER-SWARMS.

CHEAP HOME-MADE HIVES.

[5401.] Will you allow me through your paper to thank Colonel Walker for his kind answer on page 12, to my letter in B.B.J. of the 7th inst. I should like very much to find some plan whereby I shall have less trouble with swarming. Two of my stocks last year did nothing but swarm; returning the swarms and cutting-out queen cells seemed to have no effect at all. I transgressed all rules the other day by opening my hives, being afraid lest the bees might be short of stores, for I did not feed in autumn, neither had I supplied candy. I, however, slipped in a cake of candy under quilts of each on January 19, and while doing so had a peep inside. Two stocks, one having a young native and the other a "White Star" queen, were crowded with bees on eight frames, but the other six hives, including three with native queens, one with "White Star" and two with natives crossed with another well-known breeder's strain were not so good. The stock, headed by a native queen, seemed to have but two frames of bees, though, of course, the glance I gave was but cursory.

Home-made Hives.—If I can help any of my readers with regard to the construction of home-made hives I shall be pleased to do so. I have just made eight, at a total cost for wood of 5s. 6d. or 8¼d. each. Of course, to this must be added cost of screws, nails, paint. The paint I expect to cost more than twice the woodwork. These hives are far more solid and of thicker construction than one I bought from a well-known maker. They have a body-box large enough to contain eleven frames, which fits loose inside an outer-case on the orthodox "W.B.C." plan. Each outside joint has some good thick paint between the abutting surfaces, and the joints are screwed (not nailed). I'll defy any wet to get between the joints. One of your readers asked a question about runners. I find ordinary tin section-girders cut a little shorter make

capital runners for frames to work on. Your contributor "D.M.M." asked a question about Hive-roofs (page 2, of B.B.J., for January 7). May I say in reply I have never had trouble by damp getting through the roof because I treat it thus: First, I cover the woodwork of roof well with a thick coating of paint, and then paint a piece of calico or cloth (I used an old crétonne curtain) and lay the painted surfaces together. I next paint the outside surface of the crétonne, and a day or two after (or when it is dry) I give it a second coat of paint. It absorbs a tremendous lot of paint, but the roof is entirely waterproof.—S. DARLINGTON, Charing, Kent, January 20.

PREPARING FOR THE COMING SEASON.

MR. RYMER'S SYSTEM OF SWARM-PREVENTION.

[5402.] The time has now arrived for bee-keepers to formulate their plans for the season of 1904 (which, I trust will be better than the two preceding ones), I venture to write a few lines on "Mr. Rymer's System of Non-Swarming as adopted by him, and how it applies to bee-keepers who are located within reasonable distance of the heather."

I may say that the distance my bees have to travel from their home-stands to the moors is from 1½ to 2 miles, the heather then extends for miles. Now, in former years I have taken my bees, and dumped them down near a stream 3½ miles from their summer stand and invariably a considerable number have returned home, which proves that they have been there before I took them, and leads up to my question:—Is there any real necessity to carry my bees to the moor, seeing the distance is only 1½ miles to the edge of the heather-covered fells?" Another reason which prompts that question is: Supposing I was to adopt Mr. Rymer's plan, my stocks would be so strong that (as our friend "D.M.M." pointed out) there would be great risk in removing them, except in a hive specially built for the purpose. The article by Mr. Doolittle in your issue of January 21 (page 26), seems to point in the direction of not removing to heather, as he states that bees work from four to eight miles from home, and bring in a large supply of nectar. Would it be too much to ask Mr. Rymer to let us have the article on Queen-rearing, as promised some little time ago? I may say that an answer to the above queries would be welcomed by scores of bee-keepers in the Tyne valley, who are situated in the same position as myself.—J.H.W., Haydon Bridge, Northumberland, January 22.

SHOWS AND SHOWING.

DISHONEST EXHIBITING.

[5403.] This subject seems to still hold the field in your pages. I should think all good bee-keepers with level heads will be in sympathy with the object of Mr. Weston's proposals to decrease the amount of dishonest exhibiting. Whilst the desired end may, to a certain extent, be attained, it is apparent that the just must suffer with the unjust. Besides, it can only avail in the case of sections, because it is as easy to procure extracted honey in bulk and gain honours (?) at numerous shows with portions of same, as at one show with a single dozen jars. I venture to say the vendor is not seldom as culpable as the purchaser, as I fear our large honey producers (and shall I say exhibitors?) who live in a favourable district for quality, are not over scrupulous as to the "why and wherefore" of a purchase, so long as they get their price; in the majority of cases it must be quite clear what is intended. Anyway, these latter are in the position of being able to assist in securing the conviction of the fraudulent offenders, who are—or ought to be—hated, and yet the first question asked shuts up their mouths like a book!

According to some of your correspondents, the bee-keeper is himself at fault if he does not get honey of the right quality. I have kept bees fifteen years (my apiary, at present, contains twenty-two hives), and I have tried all means and devices in order to obtain honey of A1 quality, but so far have failed entirely; and when my bee-keeping neighbour, whose bees work in the same district, and probably on the same forage as my own, can show honey equal to, and in some cases better than, that of our noted prize-winners, it leads me to think there must be something radically wrong, or I am "as a child" in these matters. What we unfortunate bee-keepers will do, if the suggestion of barring dark honey altogether from the show-bench comes off, it is hard to say, unless we either give up bees altogether or make it a case of seeking fresh fields and pastures new, and carrying ourselves and our hives to where honey of right quality can be had. We could, of course, adopt the alternative of purchase if dishonest enough.

For myself I agree with the "Village Schoolmaster" who says, "Let the judge adjudicate not only by the wording of the schedule but in the spirit of same." I have heard judges openly declare their conviction that a certain exhibit of honey (and not a small one) was not produced within many miles of the county radius, and yet it took first honours because proof could not be obtained.

Dishonesty and unfair competition are, to

my mind, the chief cause of empty show-benches; remove the cause (if possible), and good effects are sure to follow. Doubtless, many of our more fortunate bee-keepers will include me among the great list of "grumblers, disappointed exhibitors, etc.," but I would much prefer taking my stand in the swelling ranks of the—DISHEARTENED, Derby, January 22.

SHOWS AND SHOWING.

PRIZE EXHIBITS AT HONEY SHOWS.

[5404.] In the endeavour to correct me, your correspondent Mr. E. G. Ive (539?, page 26) evidently does not quite understand the "not for competition" class on page 14. I contended that Mr. Hales attached undue weight to the opinion of the "general public," who, he said, "would sooner see honey of the average quality," etc. Now, if an exhibitor who usually fails in the ordinary classes has an ardent desire to please the general public with a view of average quality honey, he could easily have staged an exhibit named as such, and shown as "not for competition." I think, however, we shall have to wait long for the exhibitor possessing the courage to do this. To my mind, the general public go to shows in order to see the best of everything, not exhibits of average quality; they have such in tradesmen's windows at home. There is also another verdict at the shows which exhibitors are bound to attach value to, viz., that of the judge who awards the prizes. For myself, I say gain that in an honest manner and you are sure of approval from the general public. I would also point out to our friend Mr. Ive, that there are already numerous classes at shows specially arranged for the "hawked" exhibits, with very pressing invitations to send them on in many instances in order to improve the look of the show-bench. May I also say that my wishing Mr. Hales better success at 1904 shows was much the same thing—minus sarcasm—as saying "try ,try, again," as urged on page 26 by Mr. Ive. I would also remind the latter that Mr. Weston—on page 523—does not wish to bar the lowest exhibitor from taking prizes as often as he has the opportunity. I commend Mr. Turner's sensible letter on page 24 to your correspondent's notice especially the suggestion of classes for novices; there are similar classes at the Lincs show, and I believe they are very successful. If such could be generally adopted they would, I think, remove cause for much grumbling and lead on to greater personal efforts, without which, success at shows will not come. In referring to my prize exhibits as a veritable El Dorado, Mr. Ive tempts me to say, if this is his view let him go and do likewise; I know of nothing to prevent him. I fear, however, that so far as regards the £ s. d. side of the matter he will probably be disappointed, and find no "royal" road to wealth, even in producing prize exhibits.—A. W. WEATHERHOGG, Willoughton, Lincoln.

REMEDIES FOR BEE-STINGS.

[5405.] Seeing that no reader has so far volunteered a remedy for stings in reply to your correspondent "Stung," who writes on page 16, may I offer a suggestion? I am a novice at bee-keeping, and have not yet been stung. My sister, however, was, and I remembered seeing a remedy for bee-stings on an old "Nursery Card" long ago, It consisted of salad oil and arnica, but I could not remember the proportions. I therefore put about 20 drops or more of arnica into an egg-cup half full of oil. The stung finger (which was already very painful) was held in the mixture, when the pain soon lessened, and was nearly gone at the end of five minutes; the finger never swelled up at all. Hoping this rather vague receipt may be of use to your readers, I sign—DE POLEBUS, Wilmslow, Cheshire.

(*Correspondence continued on page* 36.)

HOMES OF THE HONEY BEE.

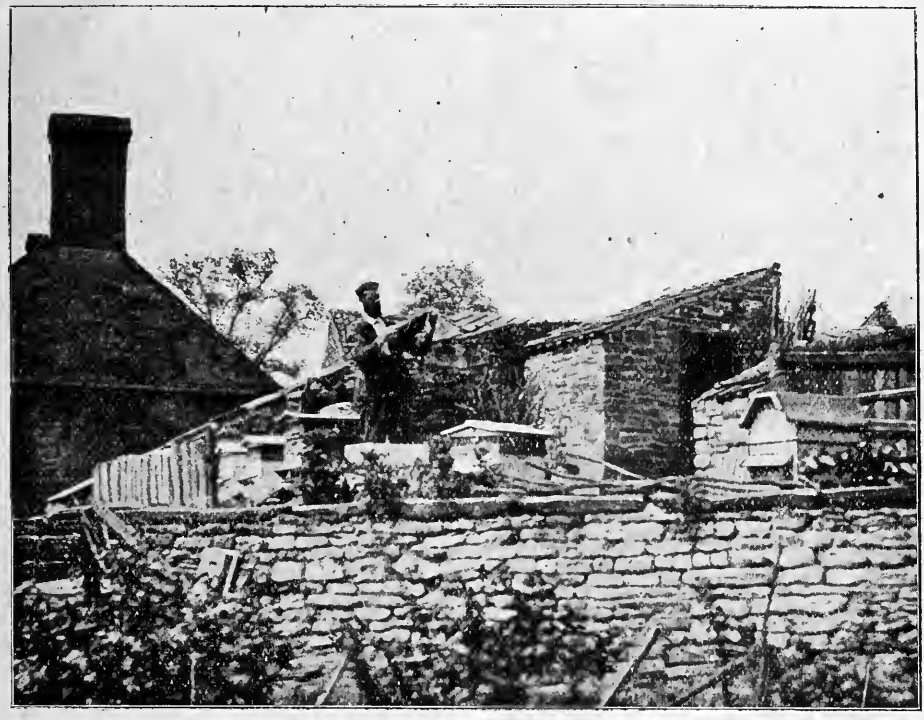
THE APIARIES OF OUR READERS.

After the interesting letters which have, from time to time, appeared in our pages signed "Tom Sleight," we are glad to see his tall and burly form on next page. Nor will readers, more than ourselves, have supposed that his wanderings "among the bees," long miles away from home by day, were varied by "hard night-toil in the coal mine." These simple words are a fine testimonial to the possibilities for good to be found in bee-craft, and so we say, long may our good friend live to find pleasant relief from his nightly toil in the merry hum of his bees in the bright sunshine above ground. He writes of himself as follows:—

"In response to your request for a few 'notes' of my bee experiences I may say my enthusiasm for bee-keeping was first aroused in the autumn of 1898, when a friend near by gave me a warm two or three hours' turning a 'Little Wonder' extractor, and later on, after having finished my job I had a taste of comb-honey, and, still later, had many an hour's chat on bees during the following winter nights. This was followed by my getting the BEE JOURNAL and reading it with much interest. After some persuasion my friend then induced me to make a start, though I had a wholesome dread of bees as 'stingers.' Anyway, I bought a skep of bees, and after carrying them thirty miles I fixed them up

in an allotment garden 100 yards away from home, not caring to have live bees with stings too near the house. But having proved my fears to be groundless, one season's experience with a frame-hive satisfied me that by careful management I could keep bees nearer home, and the spot shown in photo was selected as most suitable for the purpose. I have increased slowly from the original, adding one or two each year till I am now the owner of seven colonies of bees. I soon found that the old hive, which holds fourteen frames, was too big and clumsy for summer use (although it does very well to winter a stock in), so having seen an 'X.L. All' hive for sale I bought it, and the rest were made by myself from that pattern. The material chiefly used was pine-apple boxes, to be bought here at about one penny each, and as three or four boxes will make a hive (except the roof, which I buy from a hive maker), I don't consider my hives very costly.

"As will be seen, the hives at foot of photo stand on a terrace, raised about 4 ft. high from my other garden, while the three hives at the back are terraced 10 ft. high. This terrace the heavy rain in November, 1903, caused to come down, and all to within a foot of the hives, so it would have destroyed my best three stocks had they been a foot nearer the edge. The place seen just holds six hives, and as they are half as high as the houses, the bees have a good start off from flight boards. The wall in front is also handy for leaning on while watching the little busy bees at work. Many are the hours I spend in this way after a hard night's toil in the coal mine. As to 'takes' of honey, I am still looking to the day when I shall get from 100 lbs. from one hive, although for a bad season I cannot complain, seeing that the hive just behind me yielded 60 lbs. in 1903.



MR. TOM SLEIGHT'S APIARY, PILSLEY, CHESTERFIELD, DERBY.

Its queen was reared from the first lot I had. I had tried different strains of queens in each hive last year, but my first strain proved the best. I am—as seen in the photo—searching for a queen prior to uniting. It was taken on one of the warmest and brightest days we had last summer, with hundreds of bees on the wing at the time, but the snapshot (taken by a bee-pupil of mine) failed to get an odd one to show in the picture.

"I find bees a most interesting hobby; indeed my wife says, 'I spend about three months of every summer over them.' The plain English of this is, that I am never

to be found far from home in the summer-time; anyway, I cannot persuade the wife to venture near a hive, but as I am always employed on nightwork, there is no need for her trying to hive swarms, as I can do that; in fact, I am rarely troubled with swarms, and have only had one in four years. I have raised a few sections, but they don't sell well here, so I work mainly on extracted honey, which sells readily at 1s. per lb. So far as my knowledge goes our arch-enemy foul brood has no relatives in this village; so we are well off in that respect. I often take trips to neighbouring bee-keepers; indeed, I go far and near to see how the bees are getting on, and thus learn a bit for myself on the foul brood question, but I have never seen any of it yet. I have won a few prizes at our local shows, but cannot manage to do much in winning at large ones, although I have not given in yet. I saw it stated in the B.B.J. recently that experience enables one to get good sections, and I am beginning to find out it does. I conclude by wishing all our bee-friends a happy and prosperous year in 1904."

CORRESPONDENCE.

(*Continued from page* 34.)

BEE AND HONEY SHOWS.

FRAUDULENT PRIZE-WINNING.

[5406.] During the summer-time it gives me great pleasure to visit several shows held in the Midland Counties, and I believe that if secretaries, stewards, and judges faithfully and wisely carried out the instructions in their schedules, the dishonest exhibitor would to some extent be checked. Most schedules state "That honey and wax must have been gathered in the natural way by the exhibitor's own bees during the current year." This provision is evidently intended to prevent an exhibitor from purchasing honey and wax elsewhere, and also of feeding up his bees to produce sections fit to show. This feeding up is undoubtedly carried on, although at a ruinous expense. Some recommend that exhibitors' apiaries be visited by a small committee, as is done in horticultural societies, but I am afraid the guilty ones would not be willing to have their hives inspected at such times. The county expert always calls on the members, and I have been informed that the bees of suspected exhibitors are closed even to his inspection. Another suggestion I have heard of is to have a colour test, and disqualify every exhibit of such light-coloured honey as the committee members know of their own experience cannot be produced in the county. Our judges also might help, especially with wax. I am often surprised to see such ancient samples being year after year awarded the first prize. Some judges seem to swear by colour and colour alone, both in wax and honey. I send name for reference, and sign myself—A VILLAGE SCHOOLMASTER, Derbyshire, January 23.

SHOWS AND SHOWING.

INCREASING ENTRIES.

[5407.] Along with other B.B.J. readers, I have been much interested in the correspondence on shows and showing, and in my opinion one of the main reasons why small producers, or owners of a few hives, do not show is the expense entailed. Someone has to go without prize-money, and after paying fees of say 2s. or 2s. 6d. for each entry, carriage to show and back—the latter no mean item for long distances—while my experience proves that exhibits are seldom returned at owner's risk rates. There is also loss of time in preparing sections and honey in jars for the show-bench, and frequently more or less damage, with occasionally entire loss of same. Then, if no prize is secured, the loss is considerable for a cottager or artisan. Personally, I am inclined to agree with Mr. Turner (5395, page 24) that it would be better in most cases to have exhibits of 6 lbs. instead of 12 lbs. This would, at any rate, lower the cost of carriage. Then, again, for the owner of two or three hives, whose output of honey is comparatively small, it is not worth his while to exhibit in order either to sell his produce or attend shows to take orders.

I hoped we were going to have some really useful suggestions as to selling honey when the recent correspondence on "price of honey" commenced, but, so far, the result is disappointing. I have myself sometimes feared that the retail price might come down so low as to make bee-keeping unremunerative, partly in consequence of foreign competition, along with that among ourselves at home; but if prices do get as low as this, it will, in my opinion, be the fault of bee-keepers themselves. If more care was taken generally in grading all our honey, in order to secure a good price for the very best of it, I feel sure a market could be secured, for those able to afford it are generally willing to pay a fair price for a really good article. The lower grades could then be sold at a lower price, and the result would be a fair average. Another cause of low prices is want of co-operation, and this is evident even among members of county associations, some of whom neglect to take full advantage of membership. To give one instance, I may say, in our own B.K.A. (the Notts.) we have a system of free advertisement of honey, etc., among mem-

bers; yet one member of our association sold 2 or 3 cwt. of good honey at 3d. ped lb. "to get rid of it," while at the same time another, located only about two miles away, had not enough honey to supply his customers, and did not know where to obtain any. He would, no doubt, have been very pleased to purchase some from the other member at double the price it was sold at had he known about it.—J. Herrod, Sutton-on-Trent, Newark, Notts.

MAKING THE "W. B. C." HIVE.

[5408.] Referring to the query on page 28 last week, may I be allowed to say my own plan is to fix a piece of perforated zinc to inner body-box, and nail two small pieces of wood inside the projecting sides, and a narrow strip across from one to the other; I then tack the perforated zinc to the underside of these extra pieces of wood, and when the body-box is pushed up to outer case the narrow strip above mentioned fits close up, so that the bees cannot get up between outer case and body-box. It also prevents mice and wasps making their way up into top wrappings and, while giving free ventilation at all seasons, the body-box stands square in centre of outer case; this bridge does not interfere with the free passage to the brood-box.

I make a saddle-roof (no ridge-piece or overlapping of joints on side of roof), tacking on "Sideros" roofing-felt size of roof, then No. 8 sheet zinc overlapping, and nailing at eaves. Then, with a few very fine nails driven in the sides just to keep it down and in position, this, when painted, I find makes a very efficient roof. During the recent wet season I found my hives were perfectly dry. If a ridge-piece is used and joints overlap, No. 5 zinc would be easier to fix, but not so durable as No. 8. I use ¾ in. boards for outer cases.—Thos. Norman, Northampton, January 23.

A BEE NOTE FROM WEST YORKS.

SMALL HONEY-TAKES.

[5409.] It seems like a romance to read of the "takes" of some of our Southern friends last year, when compared with the poor season we have had here; bees having to be fed all through the spring and early summer, owing to the bad weather.

Few swarms came off until the end of June, and feeding had to be continued to keep the bees up to their usual standard, as practically no honey was coming in. On taking our bees to the heather, there seemed to be a better prospect, and on fine days honey came in fast; but this state of affairs did not last long as the wet weather returned and prevented the bees from taking advantage of the only chance left; for nearly every fine day was counteracted by three or four wet ones, and the hives came back from the moors only barely provisioned for winter, the surplus on the average being but a few pounds per hive. I send card while signing — Bee - Bee, Keighley, Yorks, January 22.

CHEAP HOME-MADE HIVES.

[5410.] May I be allowed (through your paper) to give a word of advice to amateurs who are thinking of making cheap (?) hives from disused boxes, viz: To have all the wood for the external parts of yellow or red deal. White deal and pine are only suitable for the inside.—David Hancox, Deddington, January 25.

CONVERSATIONS WITH DOOLITTLE.

MAKING A START IN BEE-KEEPING.

"Is this Mr. Doolittle, the bee-keeper?"

"My name is Doolittle, and I keep a few colonies of bees. What is your name?"

"My name is Beebe, and I wish to commence keeping bees in the spring. A neighbour told me to come over and see you, and you would tell me something that might help me in starting. I had thought of buying fifty colonies. Do you think that number would be as many as I should buy?"

"I should say that said number would be from five to ten times as many as any beginner should buy, unless he has considerable knowledge of the business before thus starting into it."

"Why do you say thus?"

"Because the beginner should guard against going recklessly into bee-keeping by putting his last dollar into a business of which he knows nothing. It is this getting crazy over a business which looks to be a good thing, but with which we are not acquainted, and investing all we have in it, expecting to make a fortune, which ruins so many. To be successful in anything, a man must 'grow up' in it by years of toil and study till he becomes master of the business, when, in nineteen cases out of twenty, he will succeed."

"Is that the way you commenced?"

"If you will pardon a little personal reminiscence I will tell you briefly of my commencement. In the winter of 1868 I became interested in bees by reading the first edition of 'King's Bee-keeper's Textbook,' which chanced to fall into my hands. Next I subscribed for one of the bee papers, read Quinby's and Langstroth's books, and in March bought two colonies of bees and the hives which I

thought I should need for two years, paying the sum of $30.00 for the whole lot. The year 1869 being the very poorest one I have ever known, I had but one swarm from the two colonies I bought, and had to feed $5.00 worth of sugar to provision the bees through the next winter. In 1870 I received enough from the bees to buy all the fixtures I wished for 1871, and a little more. So I kept on making the bees pay their way, as I had resolved, during the winter of 1869, that, after paying the $35, I would lay out no more money on them than they brought in, believing that, if I could not make the three colonies pay, which I then had, I could not three hundred."

"Did you stick to that?"

"Certainly; and in the fall of 1872 I found that I had an average of 80 lbs. of comb honey from each colony I had in the spring, which was sold so as to give me $559 free of all expense incurred by the bees, except what time I found it necessary to devote to them."

"Whew! can bees be made to pay as well as that?"

"Probably not at the present time, as honey brought at that time from 25 to 30 cents a pound, while now that same honey would not bring more than 14 to 16 cents. You will note that I said 'probably not,' and I thus said because of the depreciation of honey in price. But while the prices of to-day are against us, yet we have made such an advance in the science of bee-keeping, and a much better variety of bees, that it is possible to obtain much more honey from the same number of colonies at this time than it was in the early seventies."

"Excuse my breaking in on you. Go on with your story."

"The next year I purchased an extractor and set apart a single colony to be worked for extracted honey. When the basswood bloom opened I hired a man to take my place in the hayfield, paying him $1.75 per day. The man worked sixteen days, and I extracted during those sixteen days honey enough from that colony which sold for some 70 to 80 cents more than what I had to pay the man in wages."

"Wh-ew! again."

"I told you this only to show that one colony of bees properly worked was equivalent to myself or yourself in the hayfield; yet many a beginner who has purchased fifty colonies of bees, as you proposed, has left them to go into the hay and harvest fields, or at their other business, only to go out of the bee business a year or two later, telling us and those about them that bee-keeping does not pay. By starting at the foot of the ladder, as it were, working your way up, you will learn these things as you would not, were you to start at the top, when in all probability you would work your way down, if you did not fall down. I believe it takes more skill to become a bee-keeper that is worthy of the name than it does to do the ordinary work on a farm.

"Then must the bee-keeper be tied to his bees every day, and all the day long?"

"No. You must learn to tell just when the bees need your attention and when they do not by a thorough understanding of their workings, coupled with the same thorough understanding of your location as it applies to the bees. Then, when the bees do not require any special attention they can be left, and the apiarist do other work, or play if he likes; but the bees must not be neglected for a single day, when that day will put them in condition to bring dollars in the future, if you and I are to be successful bee-keepers."

"Excuse my breaking in on you this second time. Tell me more about how you got along with the bees."

"My diary shows that, in 1874, my honey was sold so as to bring me $970, free of all expense from the bees, not counting my time, and now I began to thing of giving up the farm, but finally concluded to hold on to it one year more, to make sure that I could make bee-keeping pay as a specialty. After deducting the expenses of the bees from the sales, I found that I had the next year (1875) the amount of $431, and hesitated no longer, but gave up farming and embarked in the bee business, with nothing else as a source of revenue. Since then the profits have varied according to the seasons and the prices obtained; but in figuring up a few days ago I found that the average since 1875, or for the past 28 years, has been about $1045 each year, free of all expense incurred by the bees; or, in other words, that has been my salary which the bees have paid me, with an average of about 75 colonies in the spring of each year."

"Do you spend all of your time on so small a number of colonies?"

"No. In the early eighties I kept from 200 to 250 colonies for a year or two; but the long-continued sickness (five years) of my father, and his death, brought new cares upon me; and, having other irons in the fire, I was obliged to reduce the number of colonies kept."

"I see I must soon be going, as it is getting late. Tell me in a few words just what your advice to one contemplating going into the bee business would be."

"My advice to you, and all others who think of trying bee-keeping as a business, would be, procure from three to five colonies of bees; post yourself by reading

about and experimenting with them, as you can find time to do from the business you are already in, and thus find out for yourself which you are adapted to, and which is the better for a livelihood—the business you are already in, or keeping bees. If successful, after a series of years you can give up your other business if you wish to. On the contrary, if bees are a failure in your hands, then you will be but little out for having tested your ability in that direction."—*Gleanings* (American).

Queries and Replies.

[3310.] *Bees near Gas Engines.*—May I trouble you to let me know through the medium of your paper whether bees would be disturbed or hindered in their work in any way if placed near an engine-room, where a gas engine is run nightly from a little before sundown to midnight? 2. Would there be any objection to placing a hive with the entrance close to a wall, a hole about a foot square having been made in the wall for the bees to go through?—N.B., Leasowe, Cheshire, January 20.

Reply.—1. If the hives were liable to constant vibration during the time named, it could hardly fail to have a more or less adverse effect on the well-doing of the bees. We say this in view of the fact that all gas engines work on the same principle, i.e., the "power" is obtained by a continued succession of explosions, each of which causes a sudden jar or shock. This would affect the bees less during actual working hours than when they should be free from disturbance. 2. No objection whatever.

[3311.] *Melting down Super-Combs.*—I cannot quite understand your reply to my query which appears on page 30 of Bee Journal last week. I did not say anything about melting down granulated honey in comb. I will, therefore, repeat my question, perhaps in a little different form. I had several skeps last summer, which I supered by putting boxes on top. At the end of the honey-flow I removed these boxes, and at once extracted the honey by putting the comb in a bag and squeezing it sometimes to get most of the honey out. The wax left behind in the bag, containing, of course, a certain amount of honey, I put by in a crock. The other day I melted this wax down into cakes in dry-heat. After I had taken the cakes of wax out, there was about three quarts of liquid left behind, and I thought that, as I did not get all the honey out of the comb when I extracted it last summer, this liquid would contain enough honey to make it suitable for stimulating the bees with in spring. It is sweet, and light brown, not dark brown—my mistake. Some of this liquid is water, of which I put about a pint in the crock for the melting wax to drop into. These combs were all new, and contained no pollen whatever. Will you kindly tell me if this liquid will do for the purpose mentioned? Hoping I have made my question plainer. I will send sample of liquid if necessary.—W. B., Sussex, January 21.

Reply.—We are sorry our reply was not satisfactory, but it was based on the information before us, and the words quoted were copied verbatim from your letter. The above as amended makes matters somewhat clearer, but not entirely so. For instance: After squeezing the combs to get the honey out, the wax left in the bag was put by in a crock. We are still unable to account for "three quarts of liquid left behind" after melting the squeezed combs to which "about a pint of water" had been added "for the melting wax to drop into." If a sample of liquid is sent as promised, we will be glad to advise further, otherwise we cannot be of much assistance.

BEE-KEEPING IN IRELAND.

STATISTICS FOR 1903.

The inquiries made in the preceding sixteen years relative to the extent to which bee-keeping is followed in Ireland, and the degree of success attained in this special branch of rural economy, were repeated this year with reference to the season of 1902, and the results will be found set forth in Table VII. on pages 42-43. In 1890, at the request of the Irish Bee-keepers' Association, the form previously used for collecting information on the subject was varied in some respects, and additional details were obtained. According to the returns received, the quantity of honey produced in 1902 was 25.3 per cent. above the average quantity for the preceding ten years. It was, however, 27.0 per cent. below the quantity for the year 1901, the returns for which showed an increase of 15.2 per cent. as compared with the quantity in 1900. The quantity of honey produced, according to the returns, was 524,166 lbs.; of this 136,561 lbs. were produced in the province of Leinster; 169,641 lbs. in Munster, 125,878 lbs. in Ulster, and 62,086 lbs. in Connaught. Of the 524,166 lbs., 347,818 lbs. were produced in "hives having movable combs," and 176,348 lbs. "in other hives." It was stated that 212,614 lbs. was "run honey," and 311,552 lbs. "section

honey." The number of stocks brought through the winter of 1902-1903 amounted to 32,770, of which 17,657 were in hives having movable combs, and 15,113 in other hives. See Table VII. on pages 42-43. According to the returns collected there were 5,890 lbs. of wax manufactured in 1902, of which 3,749 lbs. were from hives having movable combs, and 2,141 lbs. from other hives. The returns received in 1902 gave the quantity of honey produced in 1901 as 718,218 lbs.; the number of stocks brought through the winter of 1901-1902 as 34,793, and the quantity of wax manufactured in 1901 as 5,926 lbs. The quantity of honey produced in 1902 was very much greater than that for any of the years preceding 1898; it is 27.0 per cent. less than the quantity returned for 1901; but show an increase of 25.3 per cent. as compared with the average for the ten years 1892-1901.—*Belfast News Letter.*

HOW TO USE FORMALDEHYDE.

Seeing an item in *Gleanings* for October 1 in regard to formaldehyde not being a sure cure for foul brood, I will give some of my experience with it, as I have used it in my business as inspector of apiaries for Santa Barbara Co., Cal.

At first I did not have the success that I desired; but I did a little differently each time, and finally have come to the conclusion that it will cure foul brood and black brood if rightly used. It has done the work all right, as I have used it of late. I have treated several apiaries, varying from two to over a hundred colonies in each, and have cured all that I have treated under my present system. Now for my mode of treatment:

I use a Goodrich atomizer No. 4, and formaldehyde, equal part with water. Go to the hive to be treated, and raise the body of the hive in front enough to work so as to spray the liquid on to the bottom board. The bottleful will be enough for about six hives for one application, which I make three as a course of treatment. I make the applications about two weeks apart, and apply it cold, and do no more than to spray it on to the bottom board. If it is sprayed on to the combs it will kill all that it touches. The gas dries up the diseased matter in the cell, and the bees clean it out and make everything shine, and the colony soon becomes strong and prosperous; but the hive must have ventilation or the gas will asphyxiate the bees, and that makes a bad matter worse. If the hive is tight, the cover must be raised by placing something between it and the top of the hive, about ¼ in. thick. After spraying the liquid on the bottom board, set the hive back in place, and the work is done.—GEO. E. HINKLEY, in *Gleanings* (American).

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

W. P. (Silsden).—Bees and Neighbours.—The question of bees causing damage or becoming a nuisance to neighbours has been the subject of legal inquiry several times, as reported in our pages, and, if real damage is proved, or a real nuisance established, the bee-keeper is no doubt liable by law for the consequences. To talk, however, about bees being "trespassers," and as such must be kept out of your neighbours' garden, is mere nonsense. It is also fairly certain that if action be taken in the County Court, it must be supplemented by reliable evidence to establish a case and obtain damages.

J. A. RILEY (Whitefield).—Old Bee Books.—We add a further line to our reply last week to say that the market value of the 1827 edition of Dr. Bevan's work is only a few shillings, as the book is by no means scarce. We have since learned that our Senior Editor has a copy of all the subsequent editions of Dr. Bevan's work in his private library.

F. B. (Watford).—Bees in India.—We have good reasons for declining to insert the article you mention in our pages.

CONNY (Guilford).—The information you ask for, being actionable at law if published, cannot be supplied through the medium of our pages.

"INQUISITOR" (Kilgorran). — Bees and Spider Poison.—We don't quite know what you mean by "spider poison"; but it is not likely that bees gather that substance when rifling the nectaries of flowers. Anyway, it is not to our knowledge "a fact that the bee gathers honey and the spider poison from the same flower," as you state.

W. J. S. (Kilgerran).—Bees and Hazel Catkins.—If your hazels are in bloom at a season when better forage is not available, we cannot understand hazel catkins, that are yielding pollen freely, being unvisited by bees. Our bees always crowded the hazels for pollen gathering.

*** *A few Letters, Queries, &c., are held over till next week for lack of space.*

Editorial, Notices, &c.

DEVON BEE-KEEPERS' ASSOCIATION.

ANNUAL MEETING.

The sixth annual general meeting of the D.B.K.A. was held on January 22 at the Guildhall, Exeter, Colonel Walker (Chairman of the Council) presiding in the unavoidable absence of the President, the Right Hon. Sir John Kennaway, Bart., M.P. Amongst those present were Mrs. Leigh Holland, Miss Hole, Mr. and Mrs. Scholefield; Messrs. Burgess, Farrant, Furze, Parrish, Tolson, Bastow, Godsland, Goss, Piper, Shumack, Smith, and Squire.

The Council's report recorded a satisfactory progress, the present membership being 333, against 273 in the year 1903, and the accounts showed a small balance to credit.

A table of statistics gave the result of the visitation of Devon by experts, which, begun in 1902, was completed last year under the renewed grant of the County Council. The number of expert visits made on special application was 97. The total number of apiaries visited was 1,794. They contained 6,714 hives, of which 4,032 were frame-hives, and 2,682 were skeps. Of the apiaries 709 were entirely modern, 569 entirely old-fashioned, and 494 mixed. Twenty-two apiaries were found without bees; type of hives not reported.

Owing to the large extent of country visited, and the difficult nature of much of it, especially for experts, who, in many cases, were strangers to their particular districts, this return must, in the opinion of the Council, present a considerable under-estimate. An addition of one-eighth might fairly be made to the numbers given, and the number of apiaries be taken as 2,000, of frame-hives 4,500, and of straw skeps 3,000. Adopting the low estimate of 20 lbs. for frame-hives, and 10 lbs. for skeps, the amount of honey produced annually in Devon is 120,000 lbs., representing, at a wholesale price of 6d. per lb., the total value of £3,000. But a large proportion of the weight given above is comb-honey, a more valuable product, and retail prices are to a great extent obtained for both comb and extracted honey, so that the total value to the producer may fairly be taken as £4,000. To draw up a general balance-sheet of bee-keeping in Devon would be a difficult matter, involving many considerations, such as original outlay, annual increase of stock by swarming, liability to disease, production of wax, and the proportion of honey consumed privately, and does not therefore find its way to the market. Apart from this the figures given were interesting as affording a fair idea of an industry that keeps steadily increasing. The number of hives might be increased several times over without any lowering of the average yield, and with little effect upon the general market. The honey harvest in Devon, although a little unequal, had been decidedly good as compared with that of Great Britain in general. Good heather honey had been harvested. Five more members had obtained third-class experts' certificates of the B.B.K.A.

The Chairman in moving the adoption of the report and accounts had pleasure in mentioning that, since their preparation, the Sub-Committee appointed to deal with the Devon County Council had reported that the County Council were perfectly satisfied with the work done by the Association, and had decided to renew their grant on the same terms as last year. It was intended to make another expert visitation throughout the county, and to pay increased attention to the extirpation of foul brood. According to the table of statistics, about 16½ per cent. of the apiaries visited were afflicted with this disease, a very serious matter. He was not prepared to say whether Devon was better or worse off than other counties. The amount of disease throughout the United Kingdom was a serious drawback to the prospects of the industry. Last year the experts had left careful instructions with the owners of apiaries in infected districts showing how to deal with the various cases. It was intended to arrange for extra visits to those districts in the present season, so as to ascertain how far the measure had been successful. He himself considered that members should band together for their own credit and self-preservation where necessary, and by united effort attempt to put strong moral pressure upon the chief culprits.

The motion was carried unanimously.

The Chairman proposed the election of Sir Thomas Dyke Acland, Bart., as President, in place of the Right Honourable Sir John Kennaway, Bart., M.P., who wished to be relieved. Mr. Tolson, who seconded the motion, said the position of Sir Thomas Dyke Acland on the County Council made his consent to be President doubly welcome as showing the appreciation of the work done by the D.B.K.A. by one well qualified to judge. Future expert visitation throughout the county would be easier, now that they had the experience of the past two years to guide them. He quite agreed that the question of foul brood was very serious, but perhaps not so much so as would appear from the report. Mistakes might have been made, and he hoped that the next expert visitation would produce more favourable accounts. Carried unanimously.

The new President was duly elected;

Messrs. Scholefield and Farrant were re-elected Honorary Secretary and Treasurer; the Vice-Presidents and Council were elected and re-elected, and the thanks of the meeting voted to the Mayor of Exeter for the use of the Guildhall throughout the year.

This concluded formal business, and the meeting proceeded to discuss various points of interest. The question of the desirability of compulsory legislation for the suppression of foul brood was introduced by Colonel Walker, who gave an account of the past efforts of the B.B.K.A. in that direction, and how, culminating in a strong deputation to the Board of Agriculture in May, 1895, they had barely failed, and that only owing to internal differences of opinion in obtaining an Act for permissive legislation something on the lines of the Swine Fever Act. Several members took part in the discussion, and instances were mentioned where moral pressure had been quite unavailing. As long as any bees continued to fly and fresh honey was to be found in a hive, certain bee-keepers scouted the idea of foul brood, and when the stocks died out fresh swarms were introduced without any attempt at disinfection. On a show of hands being called for, the meeting was unanimous in favour of permissive compulsory legislation, while eight to five voted against compensation being granted from public funds in cases of compulsory destruction of diseased colonies.

The meeting terminated with a vote of thanks to the Chairman.

Colonel Walker was subsequently elected Chairman of the Council for the ensuing year.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "THE EDITORS of the 'British Bee Journal,' 10, *Buckingham-street, Strand, London, W.C." All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 10, *Buckingham-street, Strand, London, W.C."*

AMONG THE BEES.

RADIUM AGAIN!

[5411.] Some time ago I dealt with radio-activity in a way not intended to be taken seriously, and was then pleased to see my article treated from a serio-comic point of view. In this note I approach the subject gravely and seriously, and wish to attract the notice of scientific readers to radium as a new cure for that vile pest foul brood in bees. In experiments made it has been found that the rays of radium have proved fatal to all kinds of bacteria. A great many tests have been made in treating different kinds of germ disease, and in almost every case exposure to the rays destroyed the germs, so that on trial being made it was proved that they cease to grow and multiply in a gelatine medium. Experiments have been made whereby the rays have been allowed to pass through a hole in a metal disc and strike on a small mass of gelatine containing active germs, with the result that they were developed, *except on the spot where the rays had struck.* This undoubtedly proves that a comb so treated would be sterilised, and that radium may prove able to accomplish a cure of foul brood. I ask no one to accept this as a truism until the experiment has been tried and found a success—all I now plead for is, that, theoretically, it should do what I claim for it. Some of our scientific bee-keepers might be able to bring a small piece of comb, containing active germs of foul brood, under the action of radium rays, and prove if the deadly possibilities of germ or spore would be rendered innocuous. The heavy cost of even the most minute particle may prove a bar to anything more than this simple experiment, but this wonderful force is only in its infancy, and by-and-by will become more common and attainable. I hope this is not merely a vain dream!

A Baroness's Bounty.—The noble patron of the British Bee-keepers' Association has done magnificent work for the good of humanity at large, and greatly aided many of our minor industries, by dispensing the contents of her bountiful purse in no stinted fashion, when she deemed her contributions would encourage self-help. Perhaps no other branch of *petite culture* has received more of her fostering care than bee-keeping. Most of those engaged in this pursuit know and gratefully acknowledge her goodness in this line, but one section of her bounty to apiculture has received less attention than it deserves. Many of those engaged in the hobby have derived special benefit from the excellent library possessed by the parent Association. Personally, I have derived both pleasure and profit from a perusal of the charming old world masters whose works are to be found in this collection, and most of these bear on their book-plate that they have been presented to the B.B.K.A. by the Baroness Burdett-Coutts. One grateful reader at least presents his sincere thanks for this great boon. I have already drawn attention to the fact that no catalogue of this fine collection of books exists, and I would make a special appeal to the members of

the Council to remedy this drawback by getting a list printed. If lack of funds is the reason for the want of this almost indispensable adjunct of the library, perhaps some wealthy member of that body would draw the purse-strings for so laudable an object.

Weight of Bees.—I am unable at present to remember the source from which I derived the following facts, but they are very interesting. Careful weighing of bees going out of their hives unloaded brought out the result that, practically, 5,000 bees go to make up a pound. Almost the same result was secured by weighing a few bees on scales so nicely balanced that they could accurately tell the millionth part of a pound, and then by calculation computing the number of bees in a pound. It may be safely set down, as a rule to follow in describing the weight of swarms, to say that a 4 lb. lot numbers about 20,000 bees. In regard to the loads carried in by bees, perhaps less certainty can be expressed as the calculation depends on so many varying factors. But the following data may be relied on. Incoming bees were carefully weighed, and it was discovered that, although 10,000 bees, in a full and abundant honey flow, might carry in 1 lb. of honey, the number under less favourable circumstances ran up to over 40,000; so that the average number may be set down as about 20,000 bees. It would all depend on the nature of the flow. I anticipate that, in the height of a full flow from the white clover or the heather, the smaller number could do it, while, in the early or late honey yield, it would take all of the larger number to accomplish the feat. Just fancy, 40,000 visits to collect 1 lb. of honey!

The Practical Note Book.—Certain improvements in apiculture are brought under notice—say, the excellent bee-escape launched on the market some years ago—and we wonder how we ever got on in our bee-keeping without their assistance. Such a feeling pervades my mind as I look over this admirable Note Book. For years I kept books of all shapes and sizes, in which I entered various mems. for future reference; but, in general, they were a-missing when I most desired to make an entry. Even when made, the time taken in hunting for the desired information was so considerable that I often trusted to my memory of the incident or fact, a by no means safe guide. Here, however, is a book, containing in a few pages every single particular that a bee-man can desire, all arranged under proper heads, in so neat and get-at-able a form that no searching is required. The tables, twelve in all, are so neatly and lucidly arranged that their use will prove a perfect boon to all engaged in bee-keeping. The well-known and popular "W.B.C." hive is fully described, and well illustrated, while we have the minutest particulars of its construction, so that not even the greatest novice can go wrong. But to make assurance doubly sure, we have sectional drawings, wisely avoiding all technicalities and fractional parts of an inch, which so often prove a stumbling-block to the novice, making all as "plain as A B C." For working men, Mr. Harry Clarke's description of his home-made hive, constructed from used boards alone, makes the book worth the 1s. it costs. More of this hive anon!—D. M. M., Banff, N.B.

QUEEN-RAISING.

CELL-COMPRESSOR FOR CELL-CUPS.

[5412.] I herewith enclose two sample cell-cups in wooden shells such as I have successfully used for queen-rearing. These are similar to those described by Mr. Hooker in his letter to the B.B.J. last September describing methods of queen-rearing in America. I have seen no other reference in our journal about these handy, labour-saving appliances, so thought I would send some for your inspection. The queen-cell that is built out can by paring down the wax be used again and again; in fact, the bees seem to accept them more readily after being once used. The other is just as it comes from the "Compressor." I find they possess many advantages over the dipped cups, which are a deal of fuss to make, especially to one like myself who has other irons in the fire and often short of time. They are easily handled and removed from one hive to another without taking out the combs or risk of injury when cutting out for hatching. By using these wooden shells, the cells when accepted can be slipped into a Swarthmore nursery cage or protected with queen-excluder and given to a normal colony for completion and hatching. Our cells can thus be built in full colonies under the supersedure principle without any interference with the work of brood-rearing or honey-storing: a very great advantage in our short honey season. When I have time I hope to send a few of my experiences in queen-rearing for insertion in our journal, should you consider them of sufficient interest.—J. Geary, Barwell, Hinckley.

LEAKY ROOFS.

[5413.] In "D. M. M.'s" communication (No. 5374, page 1), I notice a reference to desirable coverings for hive roofs. Why have "coverings" at all? I know from experience that if a roof is properly made

of good sound wood, it can be made absolutely waterproof without anything above the wood. Hives I bought when I began bee-keeping were a constant source of trouble through their "leaky" tendencies; but for six years past I have made my own hives ("W.B.C." pattern), and have never yet had one to let in wet. So much trouble and annoyance are caused to the bee-keeper, as well as danger to the health of the colonies, by leaking roofs, that a real remedy is worth knowing. This I possess, with a six years' practical test of its efficiency. If any readers who make their own hives, or who want to have a reliable roof made for them by others, care to know more about the matter, it is necessary to say that instruction, with full particulars and drawings, would occupy more space than your correspondence columns allow; therefore I can only call their attention to an advertisement in the present issue. Now is the time to prepare extra hives for use in the "good time coming," and after such experiences as those of the last two years it behoves all up-to-date beemen to give special atention to the "roof" question, as with very little extra trouble, or cost, they may avoid all future difficulty and annoyance.—W. H., Brilley, Herefordshire.

WINTER PASSAGES.

[5414.] When supering for extracted honey I always use a queen-excluder between the brood-nest and upper storeys. The excluder zinc is raised $\frac{3}{8}$ in. above the top of brood-frames, by being attached to a frame made of $\frac{3}{8}$ in. boards, which rests on the edges of hive all round. I find this a capital device for allowing bees a winter passage over the frames, and one which they evidently take full advantage of. At the close of the honey harvest, after removing supers and seeing that there are sufficient winter stores in the brood-nest, I replace the excluder, putting the quilts on top of the zinc. I never trouble now to contract the brood-nest for winter, in many cases leaving twelve frames to the colony, and if any of the hives contain too much honey when examined in spring, the frames of comb in which it is stored may be used to help any colony found to be short of stores.

Distance Bees Fly to Forage. — I was much interested in the letter of Mr. Doolittle (page 26 of B.J. for January 21) having reference to the distance bees will travel for honey. The nearest patch of heather in this district is situate about 1 to $1\frac{1}{2}$ miles from my apiary, but farther on, at a distance of two and a half to four miles, there are much more extensive stretches of heather. This nearest heather-forage first mentioned above is located on a small mountain about 700 ft. high. I have been on the farther side of this mountain in the month of August, when the heather was in flower, and have noticed repeatedly that thousands of bees came and went past this heather apparently in the direction of another mountain one and a half to two miles farther on, and rising to a height of 1,800 ft. After reading Mr. Doolittle's letter, I feel convinced that my bees easily travel a distance of three or four miles to reach good and extensive foraging-ground such as the higher mountain, on which an abundance of heather was in bloom. They do this, although there is good forage nearer home in smaller quantity.

I have sometimes thought of locating a hive right in the midst of the heather, thinking I might get a larger yield of honey, but am inclined to agree with Mr. Doolittle that it is not worth the extra trouble, especially when I consider that, although my bees travel from one to four miles for heather honey, I have had as large or larger "takes" than perhaps any bee-keeper in the United Kingdom whose hives are placed in the midst of the heather.

I join most heartily with our friend, "D. M. M.," in the hope that the coming year will be a bright one for bee-keepers throughout the British Isles. I would also like to add—for the benefit of Mr. L. Crawshaw particularly—that last year was a poor year with me, as I did not average 100 lb., although my best hive yielded 146 lb., and I had several others over the century.—LANCELOT QUAYLE, Glenmay, Isle of Man, February 1.

CAMBS. BEE-KEEPERS' ASSOCIATION

[5415.] Is it possible to resuscitate the local association? If not, would it not be advisable to form a fresh one? Being recently in Lincolnshire, I met one of the members of the Lincs Bee-keepers' Association and learnt much of its work and usefulness and felt regret that Cambridge was so far behind them. There are many bee-keepers in the county, and an association ought to be well supported. Perhaps our respected Editors would publish opinions on the subject from other readers. Personally, I would suggest an advertisement in the local papers for a meeting in the county town to discuss the subject. I send name, etc., for reference, and sign—OLD ROGER, Cambridge, January 27.

(Correspondence continued on page 46.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

Mr. Fake, whose apiary appears below, may be said to have become a bee-keeper by right of marriage, having obtained his first hive of bees, along with a good wife, from his father-in-law, Mr. Norman, who is an old B.B.J. reader, and whose apiary was illustrated in our pages some years ago. We are glad to note that our young friend has proved an apt pupil, and that he is already making a success of his new hobby, as the following notes will show. He says:

"The apiary as seen in the photo is situated in North-West Norfolk. I commenced bee-keeping in the year 1900 with one hive, but now, as will be seen, I have increased to eleven. At the date of my first inspection all hives were occupied and well packed for the winter, but on examination later I found one hive (a fifteen-frame one) completely destroyed by wax-moth. And what a jumbled affair it was! I should think, without exaggerating in the least, there were as many moth-worms as there had been bees formerly. That was about my first reverse as a bee-keeper. The apiary is in my kitchen-garden, and stands about fifty yards from the house. The house seen in the photo is not mine, but the residence of our doctor, which I have found very handy sometimes! My own home is not seen in the picture; it stands to the right of the hives. I am entirely surrounded by our Norfolk farmers, who please themselves and please me by growing a great deal of white clover and sainfoin, which fact, if it happens to be a good season at all, must ensure the Norfolk apiarist a good return of honey. I will leave readers to guess for themselves what kind of a district it is, when I say that last year my father-in-law (Mr. Norman, of Harpley Mills) and myself secured no less than 15½ cwt. of honey from thirty-two hives; our respective apiaries being only 1½ miles distant from each other. The means I have of disposing of my surplus honey is very pleasant and advantageous. I have a special permit to stage honey at the Sandringham Horticultural Show (near the King's Norfolk residence), mostly held in July, when I learn that it is carried to all parts of the country. Hunstanton, Cromer, and Norwich are very handy, and many a pound I sell in my own village. Perhaps it would be a useful 'dodge' worth knowing to some of our bee-keeping friends to say that I got an artistic card printed (which can be had at small cost) and hand one to everybody who I think likely to want honey. Then I also have a card some 12 in. square, which I place at the front window, announcing, 'Pure Norfolk Honey Sold Here.' By these means I can dispose of my surplus honey at a good price (and no bad debts). My bees are very good at swarming times; they hardly ever go away, and my wife has learnt their 'wedding march' so well that she quickly informs me of their wants. During the winter months I get my supers ready, and long for the return of the delicious nectar. I conclude by wishing good luck to all bee-keepers for 1904."

MR. WM. FAKE'S APIARY, GT. MASSINGHAM, KING'S LYNN, NORFOLK.

CORRESPONDENCE.

(*Continued from page* 44.)

ARTIFICIAL HONEY.

A SANITARY INSPECTOR'S VIEW.

[5416.] I was pleased to see by your editorial note on page 31, in this week's issue of the B.B.J., that the attention of the Council of the B.B.K.A. had been called to a letter signed "A British Bee," in reference to the sale of honey, and which appeared to be not of the nature and substance of pure honey. This is a step in the right direction to prevent any fraudulent person placing on the market cheap stuff not gathered by bees and sold as honey. In my official capacity as a sanitary inspector I should have no hesitation whatever of taking a sample of the so-called honey under the Sale of Food and Drugs Acts in order to see if the sample taken by the purchaser was of the nature and substance demanded. I hope "A British Bee" will inform the inspector under the Food and Drugs Acts for the district in order that a sample may be purchased for the purpose of analysis, and should any proceedings follow I hope the matter will be published in the B.B.J.—THOMAS WELLS, Cert. San. Insp., Public Health Department, Colchester.

HOME-MADE HIVES.

[5417.] Considerable discussion has been aroused among various contributors to the B.B.J. as to the modes of making, cheapness of material, etc., of hives suitable for purposes of bee-keeping; but let me beg of those who contemplate making, or having made, hives, to be sure that they fit properly. The "W.B.C." pattern of hive is to my mind the best design for an amateur to work upon, because in this there is sure not to be two cracks opposite each other, i.e., in making the outer and inner cases. The chief warning to either amateur or professional hive-maker is to make them perfectly square and of seasoned wood, with a zinc covering for roof, underlined between wood and zinc with cardboard, if there is nothing else at hand. In examining hives (homespun), one frequently finds the wraps wet, combs all shapes, crevices stopped up with propolis to prevent draught; bees spiteful because of there being three or four separate means of exit; and the roof with the rest of the hive, (like a ready-made shirt) fits where it touches. My reason for enumerating these defects in hives is because I fail to understand how the owner can expect success to be possible under such conditions when there is no chance for anything but a failure! Robbing goes galore with such hives, and it nearly takes the strength of a horse to pull the supers off at the end of the season. Thus my advice therefore is, if hive-making is to be done at home, get suitable materials, and, if you only make one hive, make it well, so that every part is interchangeable and fits like a glove. Your bees wil be saved days of wasted labour gathering propolis, and the result will reward you tenfold, and bee-keeping will then be a pleasure and a profit. I send name, etc., for reference.—A WORCESTERSHIRE EXPERT, January 30.

PRICE OF HONEY.

[5418.] I first began to read the B.B.J. in 1878, and should like to say that, to my mind, the recent letters of "Desunt Cætera" in your pages on the question of price of honey are the most injurious and unjust to bee-keepers of any I remember ever having seen in the JOURNAL. Now, I am not a dealer in the full sense of the word, although in my time I have raised in my own apiary and also sold some hundreds of swarms and a good many hundreds of pounds of honey. Yet I assure you I would "jack up" bee-keeping as far as trying to produce honey for sale if I could not get at least 6d. a pound for good extracted honey in bulk. My opinion is that at a less price than that "the game isn't worth the candle." And I feel sure that the majority of B.J. readers who really know what honey production is in our changeable climate will agree with me as to that price. I consider that the British bee-keeper is one who certainly should be encouraged, because, in order to be at all successful, he must be industrious, tactful, and something of a scientist besides, for he must be ever on the watch for that arch-enemy of the bees, "foul brood." (I in one year once lost thirty stocks by it.) He must be prompt and plucky, have supers, etc., ready, and on, in the nick of time, and even then, if the season is against him, where are his profits? Looking at the thing fairly and squarely, along with the fact that in order to make the best of our usually very short honey-flows, one must have foundation, costing some 2s. per lb., frames, etc., etc., where does the 3d. a pound figure find him, even supposing one could get something near to the extraordinary quantities of surplus honey "D. C." wants to make out can be had, but which we know are only very rare even to such bee-men as are really up to the work, and the season, locality, and everything favourable. But let us come to the point. I would ask our friend "D.C.," "What price did you

make of that honey of yours? Be honest. Was it 3d. per lb.? If not, then please don't preach to us a 3d. gospel which you don't yourself practise. I have had this year (thanks to foundation) some hundredweights of really good honey, and have sold out at 7d. and 8d. per lb. (tie-over jars), and could have sold more? You don't happen to possess any 'screw-topped 'uns" at 4d., do you, 'D. C.'? Now then, hurry up! for 'tis evident you are expecting to prove a 'blessing' to somebody."—CAMBS. B., January 28.

THE "W.B.C." HIVE.

[5419.] I am sorry to trouble you once more, but, trusting to your wonderful stock of patience, I will venture a further line. Referring to the hive known by the above initials, I think it ought to be the universal hive, for I cannot find a fault in it, if well made and properly handled. Regarding the Query 3307, page 28, allow me to say that I put a bridge over the bee-way entrance, but leave about half an inch between it and body-box. This acts as a bee-escape, while the bees also use it to examine the space between hive and outer case, and keep away moth, etc., and during my four years' experience of the hive I never found the bees to build comb in the space referred to. Although in the autumn of 1903 one of my hives (over which my query hangs), was so overcrowded with bees when I removed the supers, that there was no room in the body-box, and this compelled the bees to cluster in the space outside the latter at night; but went out foraging as usual during the day, and when the cold came they all found room inside.

When packing up for the winter I pushed the body-box close up to the bridge, and poured cork-dust over the top of the latter, allowing it to run down to fill up all empty space. They have therefore a ¾ in. outer and 1 in. inner wall, and about 1 in. to 1½ in. of cork-dust all round, and about 6 in. of same over top of frames in brood-nest. Result: About the 20th inst. I noticed that the bees were unusually active. I therefore examined the ground about the hive for signs of queenlessness, but instead of finding a dead queen as I expected, I found two drones, one in the larval stage and the other a perfect insect, still alive. They killed off their drones in the autumn. I am wondering if breeding has commenced at this season of the year? The bees are very strong in number, also strong individually. They were headed with 1903 queen. I enclose sample of worker bees, and ask if you will give me your opinion of their breed and conduct. I thank Col. Walker for his reply to my query, No. 5366; but I wanted an annual that climbs like a runner-bean, not a shrub.—H. POTTER, Brompton, Kent.

[Bees are natives. Drone breeding now is suggestive of queenlessness.—ED.]

WEATHER REPORT.

WESTBOURNE, SUSSEX,

January, 1904.

Rainfall, 4.46 in.	Minimum on grass, 18° on 1st.
Heaviest fall, ·70 on 30th.	Frosty nights, 15.
Rain fell on 24 days.	Mean maximum, 43·8.
Above average, 2·09.	Mean minimum, 33·0.
Sunshine, 47·6 hours.	Mean temperature, 38·4.
Brightest day, 29th, 6·5 hours.	Above average, 1·6.
Sunless days, 14.	Maximum barometer, 30 77 on 22nd.
Below average, 14·9 hours.	Minimum barometer, 29 15 on 14th.
Maximum temperature, 53° on 13th.	L. B. BIRKETT.
Minimum temperature, 23° on 1st.	

BEE-KEEPING AND POULTRY FARMING.

BY VICTOR D. CANEDAY.

Read at the Minnesota Convention, U.S.A.

As I have been asked to contribute a paper for this meeting, I will endeavour to give an outline of my experience in bee-keeping, and state why we chose to keep bees in connection with the breeding and rearing of our thoroughbred poultry.

About the middle of December, 1899, we bought three colonies of bees for 6.00 dols., the low price inducing us at that time to begin bee-keeping. We wintered them in our house-cellar, and the following summer, although a very poor year, and many around us had scarcely a swarm and no surplus honey, the three colonies increased to seven, and gave us 40 lbs. of surplus honey.

During the season of 1901, the seven colonies gave us nearly 800 lbs. of surplus honey, and increased to fifteen colonies. Our best colony that year gave us 105 lbs. of surplus from the first swarm, and 65 lbs. from the old colony itself, making a total yield of 170 lbs. of comb-honey. We sold five colonies, and began with ten last spring, which increased to eighteen, and of that number we had fourteen left, the others having been sold. The honey yield with us, this year, was only about half what it was in 1901, the ten colonies of last spring's count giving us a yield of only about 600 lbs. of surplus. So far, we have not lost a colony in any way, with the exception of two swarms which left for the woods without proper warning.

With the success we have had from the outset, you will not be surprised that we are quite favourably impressed with bee-keeping as an adjunct to poultry-raising and fruit-growing.

Perhaps the one thing which most strongly influences people to engage in bee-keeping is their liking for honey, and with us the supply of honey for our own table was the first consideration.

Bee-keeping is particularly adapted as an adjunct to poultry-farming, owing to the fact that the heaviest part of the work among the bees comes at a time when the poultry work is comparatively light. On most practical poultry farms the hatching season closes with May, and the work during the remainder of the season is comparatively light, while the work with the bees is most exacting from the last of May, through June and July. If the poultry-keeper chooses to bend most of his energies to obtaining fall and winter eggs, which are the most productive of profit, he is free to give them his entire attention, as the bees require but very little of his time at these seasons.

The labour of both bee-keeping and poultry-raising is comparatively light work, and to one not over strong, and who feels the need of an open-air life, there are few occupations which are more attractive and fascinating, and certainly few which require so little capital to be invested, and yet are capable of furnishing one with a good living, if not something besides.

In keeping either bees or poultry, it is essential that one should apply himself closely to the work; although not heavy nor particularly taxing on one's strength, they require constant and systematic attention to insure best results.

Perhaps one very much disinclined to stay at home closely would not find them congenial employment, owing to this particular feature. This, however, would prove no objection to home life and rural surroundings. In fact, such would find it rather a pleasure to stay at home and give these interests the care and attention they require.

Our farm consists of only ten acres, and is devoted to the breeding and raising of pure-bred, white Plymouth Rocks for breeding purposes. Our busiest times are during the fall and winter, with the selling and shipping of breeding fowls, and during the spring with the sales and shipments of eggs for hatching purposes. Thus, you will see our work with bees comes at a time when other work is not so pressing. We have quite an orchard of plum trees well started on the farm, to furnish shade for the chickens and incidentally fruit for our table, and for sale.

Bee-keeping has been taken up as a side-line, and has been found to interfere very little with our regular poultry-work. The chickens are allowed to run among the hives, to the mutual benefit, we believe, of both bees and chickens. From the fact that the poultry frequent the neighbourhood of the bee-hives so much, and we seem to have so little trouble from the bee-moth, we judge they catch many of the millers, and I am quite sure they catch a great many drones, although manifesting a wholesome fear of the workers.

In many ways poultry and bees seem to be adapted to occupying the same ground.

The combination of poultry, fruit and bees seems to be a unique one, each contributing to the well-being of the other. Shade is one of the essentials on a poultry-farm, and nothing furnishes any more desirable shade for poultry than an orchard of plum or apple trees, while either makes a most desirable location for the apiary, especially a plum orchard. The trees being of low growth, prevent swarms clustering too far out of reach. In case of its being necessary to remove the branch on which the swarm clusters, plum trees are much less liable to injury from the unseasonable pruning.

It is generally known that fowls are of no small benefit to the fruit-trees, not only by consuming many insect enemies of the fruit, but by increasing the fertility of the soil over which they run.

Fruit-growers generally, I believe, recognise the value of bees for fertilising the fruit-blossoms and increasing their chances of liberal yields of fruit, so it will be readily conceded that the production of honey, fruit, and poultry products can be profitably and economically combined.

We would not care to engage in the culture of small fruits and bee-keeping together, especially the raising of strawberries, for the heaviest work of picking and marketing the strawberry crop comes just in the height of the swarming season, and both require prompt attention to be handled profitably.

Perhaps in the majority of cases where bee-keeping is carried on in connection with other pursuits, it would be found most convenient to run for extracted honey. One of the chief difficulties with us has been the tendency to excessive swarming when run for comb-honey, and by working for extracted honey this tendency seems to be materially lessened; I believe this the experience of bee-keepers generally.

We had one colony, the past summer, which did not swarm at all, and otherwise than the presence of considerable drone comb in the hive, we could not see anything to prevent them swarming. It was one of our best Italian colonies, and was used to supply breeding drones for our apiary.

Other colonies swarmed more than usual, although the season has been unusually cool, but they were practically without any drone-comb.

By the use of modern hives and appliances, bee-keeping can most certainly be made a source of pleasure and profit on a poultry farm.—"American Bee Journal."

Echoes from the Hives.

Morinsh, Ballindalloch, Banff, February 1.—January has throughout been a fine open month, with little frost of any keenness and no snow. The last fortnight has been compared to June in January. Several of the days were particularly mild, and bees had repeated free-cleansing flights, leaving them in good order for the stormy time which may yet be before us. If Mr. Darlington takes into consideration the "tremendous lot of paint," the short time his cloth endures without repeated painting and the trouble entailed, I think he will, by-and-by, revert to the thin-sheet zinc or tin-covered roofs. His 8½d. hive is a marvel of cheapness, and, I for one would like to hear more of it.—D. M. M.

Fir Tree Apiary, Higher Bebington, Cheshire.—Yesterday being a beautifully fine day, with several hours of brilliant sunshine, the bees from all my hives had a much-needed cleansing flight, having been prisoners through stress of weather for fully six weeks. Judging by the number of bees flying, and given, of course, a suitable season, we ought to register a much better yield in 1904 than was the case last year.—Edward D. Kendall.

Queries and Replies.

[3312.] *Bees found Dead in January.*—I should be excedingly obliged to you if you can advise me what to do for the best under circumstances. 1. I purchased a "lot" of driven bees with queen, which I got about the middle of September. Whether the queen was there with the bees I am not sure, but they worked out three sheets of foundation, and had, apparently, wintered so far satisfactorily up till last Saturday, when I saw no sign of life about the hive and could hear no sound. On the following Tuesday I opened the hive and found the bees all dead; but still clinging to the comb as when alive. They were well covered in and had plenty of candy above the frames. I cannot think the cold has killed them, because they endured much more severe weather at Christmas-time without taking any harm, and I was looking forward with much pleasure to the opening season. 2. Shall I be able to get another lot of bees this spring? if so, I should like them as soon as possible. The stock which I removed from the skep in June into a frame-hive has gone on very well. I send name for reference.—Beginner, Birmingham.

Reply.—1. If there is no food in the combs you may be quite sure that the bees have died from hunger. To say there was plenty of candy overhead means nothing, unless the bees were feeding on the candy. Stocks built up from driven bees in mid-September should be well supplied with sealed combs of liquid food, if they are to winter well, or otherwise have very soft candy placed right above the cluster, and care taken to see that the bees are feeding on the candy. 2. Your best plan will be to order an early swarm from a reliable dealer, but it would be well to study bee-keeping beforehand to make your coming bee-season a success. A good guide-book is indispensable to beginners.

[3313.] *Using Dark Honey for Bee-Food.*—I enclose a sample of honey (?), and shall be glad if you will say (through the B.B.J.) if it is suitable for feeding my bees with this spring. Last year I had a lot of honey in combs, which granulated before I got it extracted. I re-liquefied it by following a method I saw recommended in the B.B.J., i.e., I placed the combs in a large tin, which I put in a boiler and kept hot until it was all melted. When cold I lifted off the cake of wax and strained the honey through muslin and flannel; the result was about 80 lb., as sample. What do you think of it? After nice clover honey, it looks to me a useless product.—A. J. H., Millom, January 27.

Reply.—The sample is entirely unfit for table use, but will do for feeding bees in spring. The honey when gathered must have been very dark in colour, no doubt from admixture with honey-dew or aphidian honey.

[3314.] *Starting Bee-Keeping.*—As one who is contemplating taking up bee-keeping, I should be greatly obliged if you would let me have answers to the enclosed questions:—1. Roughly speaking, about what priced ready-made hive might be considered the best investment, judged purely from a commercial standpoint? To make clearer what I mean: Would the advantages of a guinea hive over a half-guinea one repay its owner the extra cost by a larger output in honey or saving of time in manipulating in, say, two years?

In making a start I do not wish to lay out unnecessary money, but at the same time wish to do everything to ensure success, and am not acquainted with any one who keeps bees to refer to. 2. Is it more difficult or troublesome for a novice to manage a stock when first bought than a swarm, or why should beginners be advised to start with a swarm? 3. Are there any other objections to a beginner commencing with Carniolan bees than their excessive swarming propensity? 4. Should a novice have much difficulty in dealing with this tendency to swarm, if using a non-swarming hive?—I send name, etc., and sign—CONTEMPLATOR, Wallasey, Cheshire, February 1.

REPLY.—1. This is largely a question of ways and means. In other words the man to whom a few shillings does not mean much would consider the comfort of working thoroughly efficient hives cheaply bought at the extra cost, while a cottager bee-keeper would think of the shillings first, the inconvenience and extra labour being a secondary matter. Then, the difference in price between a 10s. 6d. hive and one costing double the money is more imaginary than real, as our correspondent will find if he visits an appliance-dealer's show-room, while such a visit gives the only way of judging the question "from a commercial standpoint" as affording a chance to see where the extra cost comes in. From the practical point we would say select, first, a moderately low-priced, single-walled hive, consisting of body-box, holding ten or eleven standard frames and dummy, floor-board, lift, and roof; secondly, a hive having, in addition, stand and outer case. These two hives, each representing a distinct type, will enable the bee-keeper to make a final choice. Section-racks, shallow-frame boxes, and all other things which go to make up a complete hive may be bought by the dozen as required; but the hive proper is simply what we have named above, and will not cost much. 2. It is always safest for a novice to start with a swarm in a new hive, as avoiding risk of disease. 3. We do not know of any objection to Carniolans other than the one named. 4. Non-swarming hives are not suitable at all for beginners. It needs some practical experience with bees before any advantage can be got from the use of such hives. Finally, the first thing a beginner really needs is a good guide-book. Without such he is groping in the dark in bee-management.

[3315.] *Stocking "Wells" Hives.*—I will be glad if you would advise me as to the best course to take in the following case: I have two hives, each of which takes eighteen standard frames, and in November last I decided to use them as double-queened hives on the "Wells'" plan. In carrying out the idea I divided the hive into two parts, holding nine frames. I then got two stocks of driven bees, one for each compartment, and put them in one of the hives in question, but the other has only one compartment occupied. I would ask: 1. Do you recommend me to get another stock of bees for the vacant half, or would it be better to help the single colony now in possession to become strong by stimulating in spring, and when sufficiently populous to divide the combs and bees, and add another small lot with queen (which I now have by me) to the queenless half? 2. If the latter plan is best, when do you advise me to do it? I purpose uniting by getting second lot with queens on to a shallow-frame box and setting the latter above top-bars of the "Wells" hive, with excluder zinc between.—G. S., Newcastle, Staffs., January 28.

REPLY.—1. Put another stock in vacant half. 2. If new stock comes from a distance the bees may be added whenever convenient.

Notices to Correspondents & Inquirers.

"DERBY PROPER" (Derby).—Shows and Showing. — Your letter if published would, we think, only lead to further contention and disputes, which will do good to no one. It is well at times to remember the adage about "washing dirty linen in public," and the matters dealt with are such as the officials of the shows concerned have most to do. Besides, it is not wise to write as if you can see through the "noms de plume" of others, while not giving your own name for print. **Our advice is, give up contention and work together in promoting honesty on the show-bench and everywhere else.**

F. J. (Mountmellick).—1. Comb sent contains nothing worse than mildewed pollen, which the bees will remove themselves. 2. Mignonette is a splendid honey plant; if grown in large patches it will be as freely worked on as any flower we know of.

W. B. (Sussex).—Melting Down Super-combs.—The sample sent is simply honey and water of about similar consistency to ordinary bee-syrup. If heated to near boiling point before using—to remove any tendency to ferment—it will do very well for bee-food in spring.

"MAC" (Walsall).—Making the "W.B.C." Hive.—1. If you will follow the directions given in "Note Book," the ten frames will be found to go in the space there given. The same may be said of the shallow-frame box. If wrong, let us know.

Editorial, Notices, &c.

WORCESTERSHIRE B.K.A.

ANNUAL MEETING.

The annual meeting was held at the Shire Hall, Worcester, on January 30. The weather being very wet, the attendance was small. Among those present were the Rev. J. Bowstead Wilson, in the chair; Miss Willan, Rev. E. Davenport, Dr. Walpole Simmons, Messrs. Haynes, Cook, Huband, Millward, Moreton, Richings, Higley, Price, Baxter, Percy Leigh, Hyde, Wilkes, Hill, Hunt, and Phillips.

The annual report, expressing regret at the poverty of the last honey season, and the ravages of foul brood, was adopted. A welcome increase in the number of members was announced, and the accounts showed a sufficient balance in hand.

Lord Coventry was re-elected President, and Mr. C. H. Haynes's name was added to the list of vice-presidents. Messrs. A. R. Moreton and J. P. Phillips were appointed treasurer and secretary respectively, and the committee was increased by the addition of Dr. Simmons, and Messrs. C. C. Duncan (County Analyst), H. March, and A. Moore.

A motion proposed by Mr. W. H. Higley, with the object of altering the rules, in order to allow a subscription of 2s. 6d. to qualify for membership of the committee, was rejected.

Mr. Higley then proposed that an effort be made to induce the County Council to work, in the instruction of bee-keeping, in closer connection with the Association. Mr. Davenport explained the methods of the Council, and the Chairman, as a member of the Agricultural Sub-Committee of the County Council, assured the meeting that any representation from the Association would be favourably received. He also stated that Canon Coventry, another Vice-President of the W.B.K.A., never lost an opportunity of looking after the interests of bee-keepers on the Sub-Committee. The matter was referred to the Committee.

Mr. W. W. Hunt stated that he had lost seventeen good stocks of bees from poisoning by "Paris green," used by a neighbour to spray fruit-trees and bushes. He was able to gather up a quart of dead bees at a time below the entrance of a hive. He suggested that fruit-growers might be asked to use paraffin or some similar material with the Paris green to make the sprayed trees distasteful to bees. Other members present had experienced losses from a like cause. Mr. Davenport denied that adult bees would take the arsenic of the spraying composition, or were killed by it, but admitted that there was a certain amount of brood poisoned by arsenic carried home on the bodies of the foraging bees. Several members disagreed with this view. It was stated that Mr. Duncan would be pleased to analyse dead bees in order to ascertain the presence of arsenic, if a sufficient quantity suspected of being killed by Paris green were sent to him.

Mr. Millward proposed that a co-operative society of bee-keepers, modelled on the system of those in Ireland, should be formed, and the subject was left for the Committee's consideration.

The medals won at the Annual Show were distributed, as also were a second-class and six third-class experts' certificates.—JOHN P. PHILLIPS, Hon. Secretary.

DERBYSHIRE B.K.A.

ANNUAL MEETING.

The annual general meeting of the D.B.K.A. was held on Saturday, January 30, at the Town Hall, Derby, at 2 p.m. Present: J. L. P. Barber, Esq., Chairman; R. Giles, Esq., Vice-Chairman; R. H. Coltman, Hon. Secretary; Messrs. H. Hill, Rowland, Sowter, Pearman, Stone, Bollington, Pallett, S. Durose, Bain, W. M. Bennett, G. Hartley, Swan, Brayshaw, etc., etc.; in all thirty members. The minutes of the previous annual meeting were read and confirmed.

The Hon. Secretary presented his annual report and balance-sheet, which were adopted. Arising out of the balance-sheet Mr. Coltman stated that, although they had had a bad season and incurred one or two extra expenses, the result on the whole was satisfactory, the balance in hand being £9 6s. 4d.

A vote of thanks to the County Council and to the Agricultural Society was passed nem. con.

His Grace the Duke of Devonshire was re-elected President, and the Vice-Presidents, J. L. P. Barber, Esq. (Chairman), and R. Giles, Esq. (Vice-Chairman), were unanimously re-elected; as were also the Committee, with the additions of Messrs. W. M. Bennett, G. Hartley, and H. Brayshaw.

The Hon. F. Strutt, J.P., was also re-elected Treasurer, and Messrs. T. W. Jones and S. Powlson Hon. Auditors.

Mr. T. W. Jones was re-elected Lecturer, and Mr. R. H. Coltman Hon. Secretary.

The lecture report and balance-sheet having been adopted, the centres for the lectures for the coming season were approved.

A resolution (proposed by Mr. Hill, seconded by Mr. Pearman), that the "open classes at the annual show be abolished," was, after discussion, defeated; an amend-

ment of Mr. Richards, seconded by Mr. Durose, "to retain the open classes," being carried by eighteen votes to five.

A vote of thanks to the Chairman brought the meeting to a close, after which a prize drawing took place.—R. H. COLTMAN, Hon. Secretary.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of January, 1904, was £161.—From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "THE EDITORS of the 'British Bee Journal,' 10, Buckingham-street, Strand, London, W.C." All business communications relating to advertisements, &c., must be addressed to "THE MANAGER, 'British Bee Journal' Office, 10, Buckingham-street, Strand, London, W.C."

****** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.***

NOTES BY THE WAY.

[5420.] The weather is the chief topic with bee-keepers just now, and no doubt some of our friends' apiaries—if not under water—are isolated by the floods in the low-lying districts. Yesterday (the 7th) was a spring-like day, and a good number of bees were taking a much-needed cleansing-flight.

With the month of February the active bee-season of the year begins. The untoward weather of 1903, with its abundant downpour of rain all through the autumn, prevented a large storing of honey in the brood-nest for winter consumption, and notwithstanding the urgent and frequent appeals of writers in our BEE JOURNAL at the time to feed up liberally in order to supply the deficiency, we already hear of stocks starved to death for want of that timely help. In these cases the fault is entirely that of the owners. However, I contend that our bee-season of 1904 has already opened, and I urge all who are in doubt as to the sufficiency of stores in any of their hives, not to neglect giving to such stocks a cake of candy (or a jar of candied honey laid on its side with cap off). If this is done, and the tops of frames are well wrapped up to keep in the warmth, it will tide over impending famine. If any colony should be found in a comatose state, a warm brick well wrapped and laid right over the cluster will revive the bees with wonderful rapidity, so that they can take their food readily. I have saved more than one good colony by this means in the years that are long behind. When giving candy-cakes always see that they are inverted over the cluster of bees; if they are at the feed-hole, well and good; but, if not clustered there, cut another hole in quilt directly over the cluster, thus ensuring that the bees are able to partake of the feast you have provided for them.

Shows and Showing.—I am sorry for your correspondent "Disheartened" (5403, page 33), in his failure to secure prize-taking honey, but with regard to the culpability of vendors of honey of good quality I, as a fairly large producer, may perhaps reply, if not for others, at least for myself. First, as a producer, I have honey for sale to all customers who send orders and cash! Then, after or during a show, I may perhaps receive an order or an inquiry for a 12 lb., 14 lb., or 28 lb. tin of honey such as, or of the quality of, your exhibit at "Derby" (?) for instance. If I do receive such an order I would ask, Am I, as a producer, to heckle the inquirer and say, "Is this required for 'showing' or for a friend to show." Or must I reply, "No, I am not going to sell my produce to you except you can satisfy me that you will consume this honey as food"? I do not consider that commercial morality requires me to catechise my customers in this way; neither do I think that a parley on these lines would get at the truth of the matter. To make the matter clearer, let me say I have heard bee-keepers declare that when they have sold honey to customers who they felt sure required it for show-purposes, that they have purposely sent honey which they (the producers) knew would not take a prize! Was this following the golden rule? I trow not. I would much rather have declined the order, because, when a customer is charged a fancy price for one's "best honey," he, whatever his intentions, is entitled, if one closes with the offer, to a supply of the "best."

In reply to 5407 (page 36) I would say "Owner's Risk Rate" does not apply to honey returned from shows; at least I am so informed by railway officials, but only on the outward journey, so that two boxes which go to show for 2s. or 2s. 6d. cost 4s. or 5s. on the return. This is one of the "sweets" competitors have to endure.

Bees and Hazel Catkins.—I have noticed many times during the last twenty years that instances have been given of bees working on the hazel catkins, but in all those years I have never seen one of my bees working on these catkins, although we have a row of hazel wood within a stone's-throw of my home apiary, and I have looked for the bees working on them many times, and, although thousands of bees are passing and repassing to the wood in the distance, yet never a one stayed to gather the home-grown pollen. I have never seen the hazel pollen under a good microscope, but have often wondered if it was not a suitable food for the young brood, and that the bees by instinct neglected to gather what would be useless, or perhaps injurious.

I would caution bee-keepers who may use old honey or cheap-quality honey to thoroughly boil same with water added, before using honey as bee-food; also, to give the same late in afternoons, as bees fed with honey are apt to take to robbing other hives; in fact, I would not buy honey at 2d. per lb. for bee-food. I would prefer sugar (pure Demerara) for syrup-making, and fully believe my bees would do better on the sugar syrup than on cheap dark honey.—W. Woodley, Beedon, Newbury.

NUCLEI AND QUEEN-RAISING.

MR. J. RYMER'S PLAN.

[5421.] From inquiries I have received, both by letter and from those who have paid me a visit when in the neighbourhood, asking how I manage to keep my stocks headed with young queens when I had no swarming, may I be allowed space to say that it is impossible for me to reply to all by letter or put the information required into an hour's bee-chat. In order, therefore, to meet the case, I am now fulfilling my promise to give the whole plan in the Bee Journal.

The raising of young queens is a most interesting hobby, especially if the raiser has the luck to breed a queen good enough to break his own previous record of honey. The pride one has in drawing attention to such a colony as being headed by a queen, reared by yourself from your own stock, will do much, I venture to say in rousing more interest in your bees, and they will be better looked after in the busy summer, and more carefully prepared for winter.

I cannot pretend to give any information of a scientific or theoretical nature, but will simply describe the method carried out in my own apiary. Nor is there anything new in my plan. I am extending an old, rather than introducing a new, principle. Moreover, these lines are not intended for the advanced queen-raiser. I only write for the amateur who may wish to supply himself with young queens when desired, and give details of the easy way that this can be done.

The advantage to be gained from the possession of nucleus colonies containing such queens to draw upon at all seasons must be obvious, and because, no matter how small your apiary, cases of trouble will occur when such a nucleus would quickly put matters right. Whereas, without this provision a colony might inevitably come to grief, say, from mishap to its queen, at a time when she could not be replaced.

To enable you to understand my views, let me say, some years ago I got the idea that, in order to make my bee-keeping a success, I must secure the advantages named above, and improve my system of management by working the apiary on a surer or more business-like basis, and here are the points I jotted down at the time for use in carrying out my plan.

1. A supply of young queens must be kept on hand, available at any time, and some hives provided sufficiently large to accommodate a small stock of bees for winter.

2. The queens must be raised from the best mother-bee in the apiary; one that had given satisfaction for two years in succession.

After some experimenting, and a good many failures, I began to feel my way, and learned how to start with some degree of certainty, and I can now state exactly how I proceed myself at the present time.

Nucleus Hives.—Those were made on the cheap. I procured a quantity of used boxes from my grocer, which cost me 5s. for the lot! From these boxes I made twenty hives, the wood alone thus working out to 3d. for each hive! Not a big outlay to begin with.

The inside measure of the hive when made up is $9\frac{1}{4}$ in. by 17 in. full, and 11 in. deep, with two boards $8\frac{1}{2}$ in. deep and placed $14\frac{1}{2}$ in. apart in the body to carry the frames. Each hive holds six frames, and two $\frac{1}{4}$-in. strips of wood, one for each side of hive. The roof is flat, sloping from front to back to carry off wet. The floorboard is loose and the entrance to the hive is cut in the floorboard. The hive-body proper must be cut perfectly level, so that it can be removed from the floorboard and placed above an established stock without any packing being required. I paint these hive-bodies white, chocolate, and green respectively, for reasons given below.

Rearing Queens.—This is a rather difficult item for the amateur at first, so I would say do the best you can. You might start a few nucleus hives during the swarming season from small casts, or in returning swarm to parent hive. Make a nucleus from the latter before returning the bees, being

particular to select a frame or two with a ripe queen-cell on each. As my year begins in the autumn, when the honey season is over, I will commence from then; I think I can make it more clear.

The end of August finds me with twenty young queens in nuclei. After all surplus honey is removed each hive is overhauled to ascertain if queen is all right. Should any be found queenless I select a nucleus lot and unite them to the queenless stock. In cases where I have decided to replace the old queens, the latter are taken out, and young ones introduced, this will probably absorb ten young queens, the other ten remaining over winter. Then in the early spring another examination takes place, and, as a rule, I may require another three or four young queens to replace those that have died during winter or early spring, so that I shall have six queens left. Then there are my two old queens that have given me the best results for two years in succession, located in two small hives, holding seven frames each. This forms the stock to refill my nuclei with young queens, the six hives supplying the bees and the old queens the eggs, from which the queens must be reared.

As soon as I have a supply of drones on the wing and the small hives are full of bees, I place a clean worked-out comb (preserved for the purpose) in the centre of each of the hives containing the old queens, and they remain there for two days. Meantime I prepare two empty hives, putting two worked-out combs in each hive. If I have no worked-out combs, full sheets of foundation are given instead; then in the middle of the day, when the bees are flying, take out one frame containing brood and honey from one of the stocks with old queens, brush the bees back into the hive, and place their comb in the empty hive; then take out the comb put in two days before (which will now be full of eggs nearly ready for hatching), brush the bees off this comb also, and place it in the centre of the empty hive; then go straight to the nucleus to be removed and set the prepared hive exactly in the place of the nucleus, removing the latter to another stand, the bees will do the rest. Repeat same with the other prepared hive, and fill up the hive from which the combs have been removed. Be very careful that the old queen is not on the comb when removed. Those who are rearing queens must see that the latter are always reared on the frame of comb containing the eggs. This will ensure the best queens procurable. In from three to four weeks the nucleus first removed will be ready for a second removal, when the same operation must be gone through as at first.

It is wise to always have one hive rearing queens, so that, should any be lost at mating time, the bees may have a ripe queen-cell given them, and so save a lot of time. I will now suppose that success has been obtained and the required number of queens secured. You will now have the six queens carried over winter in nuclei, and those must be removed in order to have all nuclei occupied by a queen of the current year. During this time the bee-keeper will have kept an eye on his working stocks, and should be in a position to judge if there is any that is not progressing satisfactorily. From all such the queen must be removed and replaced by those in the nuclei. This process of weeding out is of very great advantage in keeping all stocks in good condition.

Requeening.—My plan is to treat every case of requeening on its own merits. I have no fixed method whatever. I never interfere with a stock in the honey season, so long as it is doing well, preferring to be guided by results. No good is done by pulling them about in overhauling, while great harm may follow. With regard to utilising those nuclei, I may say, when superseding a queen, I remove the old queen in the evening when all is quiet, and the following evening I place the nucleus hive on the top of the queenless lot (minus floor-board, of course), bees and all. When doing this I use two carbolised cloths. I first take the nucleus off its floor-board and set it on to cloth, then peel back the cover of the queenless lot, pulling over at the same time the carbolised cloth, and after a moment or so withdraw this cloth, pop the nucleus on the top, cover all down, leave it for two or three days, thus giving time to rearrange matters, and all will be well.

On finding a hive that has been for some time queenless, a different course is followed. I remove the queenless lot about 18 in. to one side, and set the nucleus in its place, allowing the flying bees to join up of their own accord. But if I supersede a queen and wish to keep the bees in the nuclei for some other purpose, I take out the old queen in the evening, and the following evening I pick the young queen off her combs, place her in a cage, carry her in my waistcoat pocket for half an hour, and then introduce her direct. For this purpose I have a special cage, 1½ in. by 2 in.; the top is glass, and the bottom a tin slide. I can go to the hive, turn back a corner of quilt, and lay my cage on, glass upwards, draw the slide, and see the queen go down, then drop the cover back quietly, satisfied that all will be right. In this way it is not wise to make any hard-and-fast rule in introducing, but treat each case with care and judgment.

With a little forethought, nucleus colonies of bees can be utilised in various ways,

(*Continued on page* 56.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

Our good friend Mr. Rampton, seen in his bee-garden below, may be set down as a bee-man who instinctively adopts the wise maxim of "making haste slowly." This is a specially useful motto in bee-management, and he who takes "twelve months' persuading" before admitting a bee-hive into his garden is absolutely safe as a bee-man. For the rest, his interesting "notes" need no addition from us. He says:—

"It is now eight years since I began bee-keeping, which I should not have done but my wife was offered a hive of bees, and it took her just twelve months to persuade me to allow them to be placed in the garden. But that was only the first obstacle overcome. The next was my terror of stings. Before beginning manipulations I obtained a pair of thick hedging gloves, and being safely tucked up in these and a veil, I started to work. Needless to say, my gloves were soon full of stings; but after a while I mustered up courage to leave them off, with the result that I very soon lost all fear. I went carefully on for two or three years, increasing gradually, and each winter lost several stocks through trying to winter on six or seven frames. I now leave the body-box full, so that there is never less than ten frames, and I never lose a stock from starvation. I rarely feed them. Nearly all my hives (which I make myself) are of the 'Combination' pattern, and I am old-fashioned enough to prefer the self-spacing frames. I have tried others, but do not like them so well. I have now forty stocks, and intend increasing, as I have now sold all the honey I have taken this year. I frequently take 100 lb. of honey from one hive, but my average yield is about 60 lb. per hive, the chief source being sainfoin. For the grocery trade I pack my sections in coloured cardboard cases, and charge 10s. per dozen, carriage paid. The extracted honey I put up in 16 oz. and 8 oz. screw-cap glass jars, with my own label. For these I charge 10s. and 5s. 6d. per dozen respectively. I am glad to say I have never had foul brood to contend with. I try to keep the bees as clean and healthy as possible by moving each stock into a clean hive in the spring, and in the case of old combs boiling them down and replacing with new sheets of foundation. I hold the third-class certificate of the B.B.K.A., and when I have more time intend entering for the second-class examination. The hives seen in the picture (with their owner) face south-east, and are in a two-acre field. There is a good stream of water near, and plenty of forage close at hand. I owe many thanks to our county expert for a lecture he gave in a bee-tent in the district some years ago, which gave me my first practical idea of the management of bees, and enabled me to understand more fully the directions

MR H. E. RAMPTON'S APIARY, BISHOP'S SUTTON, ALRESFORD, HANTS.

in the 'Guide Book' and also the BEE JOURNAL, which I still read, and find them very interesting and instructive. My wife is a great help to me with the bees all through the season, at the end of which I leave her all the 'nice' (?) work, such as melting down the old combs, and generally clearing up things which have been in use during the year.

In conclusion, I would say to those who are constantly asking, Do bees pay? Yes, they do; but not without care, and strict attention to every necessary detail."

(*Correspondence continued from page* 54.)

even in cases of disease. It is better to destroy the stock at once, and let a nucleus take its place, than to run the risk of its spreading to your other stocks. Again, it is possible to convert an indifferent stock into a good and prosperous colony.

Nucleus colonies should not be mixed up with the ordinary working stocks, but should have a warm corner of the apiary to themselves; any odd corner will do. I keep mine on separate stands, three on each, and have had the best results in mating by having them so placed, each hive being painted a separate colour, white always in the centre, chocolate on one side and green the other. I rarely lose a queen in mating. Whether it is the distinct colours, or their being dotted about in threes, I do not know, but the result has been most satisfactory.

The class of hive I have given has suited my purpose admirably, but if I had any more to make I should alter my plans somewhat. I should have some made as "Miniature W. B. C.s," the brood box to hold six frames. This would be a decided improvement for standing over winter, and would be very handy for cases of uniting. Of course, you will understand I use the "W. B. C." hive only, and my remarks must be taken to refer thereto. —J. RYMER, Levisham, February 6.

BEE-KEEPING AND FRUIT-GROWING.

"OWNER'S RISK" RATES.

[5422.] In the B.B.J. of January 28 (page 31) mention was made of the fact that it was decided by the B.B.K.A. to ask permission to send two representatives before the Fruit Committee of the Board of Agriculture on the benefits to fruit-growers from the practice of apiculture. May I be allowed to suggest a point for that committee to know and act upon? Railway companies will now only accept comb-honey at "owner's risk." This particular point should, I think, be fought and legislated upon. The railway companies refuse compensation for damage except upon "proof of wilful" negligence. Note the words "proof" and "wilful." I would specially invite attention to the words "proof" and "wilful" in dealing with damage through negligence, because it frees the company from carelessness, which is really "negligence." In my own case, I had a consignment at "owner's risk" which did not reach its destination at all till the goods were too late to be of any use, and I lost 32s. in consequence. The railway company admitted negligence, but not "wilful," though it was a case of gross carelessness. Let our bee-keeping representatives collect evidence on this "owner's risk" business and appeal for legislation to remove a real grievance by making railway companies reasonably responsible for their own negligence. Otherwise we shall have the companies helping to cripple the honey trade as they have done the flower and fruit trade.

I have written the horticultural trade journals and appealed to the Board of Agriculture, as well as asking our local M.P. to personally lay the subject before the Board of Agriculture. Now is the time, so if any of your readers can give paper evidence of loss through "owner's risk" rates, let our representatives have it, for I believe in using every means to increase and foster rural industries.—W. J. BELDERSON, Terrington, Norfolk, February 6.

CAMBS. BEE-KEEPERS' ASSOCIATION.

[5423.] May I in reply to your correspondent "Old Roger" (5415, page 44), who, in last week's issue, refers to resuscitating the Cambs. B.K.A., be allowed to say I think it would be far better to start an entirely new association, and I suggest that an advertisement should be inserted in local papers to call bee-keepers of Cambridgeshire together and arrange a meeting to be held on some Saturday on an early date. I think it is deplorable that one of the best counties in England should not have an active Bee-keepers' Association. To my mind, the cause of the inertness or inactivity of the old one was through lack of funds. If a new one is formed the members should be pointedly asked to pay their subscriptions in advance, and put plenty of enthusiasm into the thing to make it "hum" both with bees and members. Personally, I should be very pleased to give it my most active support financially and as a working member if the rules are not too "clannish" (as, I am sorry to say, some associations

are). Though living in Hunts, I may fairly claim a right to active membership, as I have three apiaries in Cambs., and I and my house is not 100 yards outside the county. — RICHARD BROWN, Flora Apiary, Somersham, Hunts.

[5424.] Regarding the letter in your last issue as to the proposal to revive or re-start the Cambs. Bee-keepers' Association I am entirely in agreement with "Old Roger," and hope that some energetic and capable man will be found to represent the town and district of Cambridgeshire, that we may stand well to the front in all matters pertaining to the industry of bee-keeping. I send name, etc., for reference, and sign myself— INTERESTED, Cambridge, February 6.

[5425.] I was very pleased to see in your last issue (on page 44) a suggestion that the Cambs. Bee-keepers' Association should be re-formed or resuscitated. I am only one of many Cambs. bee-keepers who would be glad to see this done. If a public meeting is called, I shall do my best to attend and to bring others interested in bees.—G. N. TEBBUTT, Cambridge, February 8.

HOME-MADE HIVES.

[5426.] I forward an account of how I make my hives, trusting that by so doing I may benefit some one, and also in the hope that other bee-keepers will favour their fellows with any ideas that occur to them. It betrays a selfish spirit to "sell" information to each other, instead of acting as our little subjects the bees do, who give all, even life itself, for the common good.

I make the body-box first, always, 16 in. wide by 14½ in. long, inside measurement. The side-walls are 9 in. high, the back and front 8⅛ in. I cut the entrance in the front board instead of lowering a portion of the floor-board. In one hive I made the side-walls 10 in. high, an unfortunate mistake, as I found when I came to put on the excluder and the supers. The excluder did not fit, and the supers stood too far above the brood-frames. The side-walls must be flush with the tops of frames. For metal runners I use old section super girders tacked on. These raise the front and back to proper height above floor-board—8½ in. To prevent bees getting up into the space between body-boxes and outer case I put in strips of wood just above entrance. These fit too closely for bees to pass, but not so closely that air cannot circulate. I next make outer case, taking my measurements so as to allow it to slip over body-box. The outer case is fitted with plinths, porch, and entrance slides. The latter are easily made with rebating plane. In one hive I made a very deep outer case, thinking to have more room for supers. It was another mistake, for I found on going to take off a full super that I could not use a screw-driver to prize up and loosen the section-box. In lifting it up by main force some of the brood-frames came too. The top edge of outer case should not be far above tops of brood-frames, and may well be below them. The floor-board consists of two wide, thick joists—cut sloping in front to form the flight-board—with boards across. The "lifts" are usual shape, with plinths. The roof is ridge-shaped, and extra care is taken to fit edges of boards to each other. The sharp edge at the top is planed flat, and a piece screwed on to flat surface to prevent water getting in at that most vulnerable point. As explained before, all joints have thick paint between them, and are screwed up with 1¼ in. screws while paint is wet. The roof is covered with paint and cloth, and the latter becomes practically part of wood, for one cannot tear it off.

Readers may poke as much fun as they like at these cheap hives, but, after the late heavy rains, they are as dry as a bone inside, and I shall not pay 21s. for what I can make for 1s.

I have only bought two hives—a combination and a non-swarmer. By-the-bye, another mistake of mine. I made a non-swarmer myself. The shallow-frame case underneath I fitted with a little window, so that I could see when to remove it and put it above. There were doors to enclose this swarming-chamber, and to protect glass, and very proud was I of my ingenuity. But, alas! when the day came to remove the shallow-frames from below to above it was stuck fast with propolis. I tugged, I strained; but, no, it would not budge! At last I sat down, put my feet against edges of hive, and "put my back into it." Out it came with a jerk; and—well, we will draw a veil over the rest of it! There is one comfort, however, the bought non-swarmer was worse, and in dragging at it the handle came off, and that non-swarming chamber is still where it was put two years ago. No more non-swarmers for me. My letter has reached an inordinate length, so I will stop now, but at some future time will describe how I made an extractor large enough to take four standard frames—or, at least, I will do so if any readers express a wish to that effect. I do not want to waste time writing twaddle that nobody reads.—S. DARLINGTON, Charing, Kent, February 8.

P.S.—On looking through above I find I have omitted to say what the hives are made of, viz., Quaker oats boxes, Maza-

wattee tea boxes, and rolled tongue boxes, which I get from the grocer at 2d. each. I have made eight hives for 6s. 6d., not counting cost of screws and paint.

NOTES FROM WYCHWOOD FOREST.

BEES AND THE FLOODS.

[5427.] The first thing in one's mind, when thinking of the bees and their work, for some time now has been the weather, wet, wet! wet!! every crack and vent letting copious streams through. I fancy careless folk with leaky roofs will not have a good "spring count" of live stocks to report. Then the floods have been very disastrous in most low-lying districts. But though we are very near to the river Evenlode—my own hives being within a hundred yards of its banks—yet the hill rises so rapidly that we are high up out of the reach of the water, as are, I believe, all the bee-hives in the neighbourhood. Not so a relative of mine, whose apiary is located some distance from his home. On paying a visit to see how the bees were faring near the stream, he found to his dismay that the flood had risen close up and around the hives. However, like a true bee-keeper he set to work without delay and started carrying the hives to dry ground in the meadow; and a lively time he had, wading along through the water with a frame-hive in his arms. Unfortunately, his foot caught something or went into a hole, and down went my relative, hive in arms, into the waters; but he pluckily stuck to his task and got the bees out of danger with no further harm save a wetting, and, as may be imagined, some damage to the poor bees.

The mild winter so far indicates an early bee-season, unless we get a sudden check through hard frost. At present the birds sing gloriously in the trees around our house, and the flowers, etc., seem as if on the verge of opening spring. Wild spring flowers are quite remarkable hereabouts for their numbers and variety. In one week in the month of July there have been identified no fewer than 307 different kinds in bloom within a five-mile radius of Charlbury, so that the curious in these matters would do well to visit our quaint old town and see our forest and learn its story, which is in many chapters on many subjects. Then our honey is splendid, there is no question about that; and here I want to say on behalf of our Wychwood Forest district bee-keepers that we, not being favoured like some of your correspondents (as letters in B.J. show), in being able to get 1s. each or more for good sections, so that I should deem it a favour done to our local craft if some of these fortunate gentlemen who have "sold out" all the honey raised at 1s. "and could have sold more," will just say in the B.B.J. if they want good honey and I can put them in the way of "business"? While our neighbourhood will be brightened next year, and our crop will go off briskly at fair prices, I conclude by saying: "May I have the spirit of persuasion, and you the ears of profiting, that what I speak may move, and what you read may be believed."—JOHN KIBBLE, Charlbury.

UNFAIR DEALERS.

[5428.] May I be allowed to bring to your notice the want of courtesy, to say no more, that one of our leading appliance manufacturers exhibits in his dealings with his clients?

On November 30 last I wrote to an appliance dealer for a wax mould to cast cakes of wax, enclosing cash for the same. In due course the "mould" arrived, but I found that it would not cast cakes 1 oz. in weight on account of the divisions not being deep enough by a quarter of an inch. If 20 oz. of wax was poured into the mould the divisions were completely submerged, and if only sufficient wax was poured in to reach the top edge of the divisions the cakes cast were considerably under 1 oz. in weight.

I immediately returned the divisions to the seller, pointing out where the appliance was faulty, and requesting him to forward me divisions cut to the correct depth. But he has not taken the slightest notice of my letters. I wrote him again on January 6, and still got no reply, and again on January 18, saying that I was anxiously awaiting to hear from him. Meanwhile my customers are waiting for wax-cakes, and I am unable to supply them. Could you favour me by obtaining an explanation of this strange conduct? My communications are placidly and consistently ignored.—C. H. B., Newmarket, February 5.

[We will draw the attention of the dealer, whose name you send, to the matter.—EDS.]

Echoes from the Hives.

Barnwell, Oundle, February 5.—We are still having very wet weather here in Northants. The floods are so high now that many of the roads are impassable. In several of the villages around the water is entering the houses, compelling the occupants to live upstairs. But the sun

came out this afternoon, and my bees were flying about in great numbers. In fact, the "humming" sounded so much like spring that it made me fancy it was May instead of February. All my colonies appear to have plenty of stores, for which I am thankful when I see the bees coming out so strong in other respects. Will you please let me know in next week's B.B.J. if the enclosed bees are the common natives?—W. ALLEN.

[Bees sent show a slight trace of Carniolan blood, but so slight that you may regard them as ordinary natives.—EDS.]

Queries and Replies.

[3316.] *Distance between Surplus-Chambers.*—Would you kindly tell me, through the B.B.J., the correct distance between top of brood-chamber and bottom of shallow frames. I have the "Guide Book," but it does not say the distance between the two. In my hives there is a space of $\frac{1}{2}$ in. between bottom-bar of standard frames and floor, and $\frac{1}{4}$ in. space around sides; this is all right. When excluder zinc is on, there is a space of $\frac{1}{4}$ in. to bottom-bar of frames in shallow-frame box, and when the latter is full and I add another box below, the bees build combs down past the $\frac{1}{4}$ in. space, and attach them to tops of frames in lower box, so that when I want to remove one box, the two racks of frames are braced together. I therefore ask, Must I give more space, say, a half-inch, between frames in supers? Referring to the question asked in B.B.J. of December 24 (page 517), by a correspondent who needs a good bee-flower which is a climber, the best one I know of for covering a house-wall or giving shade for bowers or summer houses is the tea tree. It grows rapidly and gets very large if allowed to do so. Its leaves are very small, and late on in summer a small single flower sprouts out from nearly every leaf. I have one of these climbers growing close to my apiary; it covers the end of a house 25 ft. wide and 40 ft. high. We cut off about six or seven feet from its top every year to stop it from climbing on the tiles or roof. I send a small twig off it in this letter so you may see how numerous are the joints from whence a leaf will come out in spring and a flower in summer. At a house in Bristol where I formerly lived, you would not see a single bee in the garden until a tea tree bloomed in it, and then they were there every day until it was over. Now for a question of my own. Do bees gather honey or nectar from the blossom of the common red plum? There are many acres of these plums in the parish where I keep my bees, and I have never noticed them on this particular tree. They gather from the cherry, damson, and small black plum, besides apple, pear, etc., and many others, but the red plum seems to be unvisited by the honey-bee. A few people I have asked say, Yes, they do. But my own experience is against this, and I have watched for the past two years. I should be very pleased if some B.J. readers could say if their experience coincides with my own or goes against it. to settle a little argument with a friend. —JAMES SKINNER, Bristol, February 6.

REPLY.—The distance is clearly stated in "Guide Book" (page 60), when describing the shallow-frame box, i.e., $\frac{1}{2}$ in. When excluder zinc is placed on top-bars of body-box it reduces the space very slightly, and this should be no detriment. We cannot say from personal knowledge if bees visit the blossom of the red plum; and will be glad if some of our readers who are fruit-growers will reply. Perhaps our friend Mr. Richard Brown, of Somersham, will be able to throw some light on the subject.

[3317.] *Home-made Hives.*—I shall be pleased if you will give me a word of reply to two questions respecting the "W.B.C." hive, which I have almost finished making according to directions in the "Note Book." 1. I cannot quite see how the dummy-board is to work. I find it would be all right should I keep ten frames in the hive; but should I want to reduce, say, to seven or eight frames, I find the bees would be able to get behind the dummy-board through the entrances being $15\frac{1}{2}$ in. long. Another thing I find is in using the metal runners which keep the frames from sides at about $\frac{1}{4}$ in. If these are fixed, would it not be difficult to withdraw the dummy-board? I have never seen metal runners before. But, as mine are, they set out from sides to the above inches. 2. I find, in putting the shallow-frame box on top of the body-box, and in using, say, $\frac{3}{8}$in. "W.B.C." ends, your bees would be able to get between at the ends. Do you overcome that by putting, say, a strip rolled along the end of frames so it would come flush with top of body-box? I have enclosed stamp for reply; but should this have to go through B.J. I should want you to sign my name —E. P. ANXIOUS, Gravesend, February 8.

REPLY.—1. The trouble you fear—if it arises—is met by placing the body-box with frames parallel to entrance for the time being. If properly made, the body-box may be worked either way, i.e., with

frames at right angles to, or parallel with, the hive-entrance. The "metal runners" have nothing to do with keeping frames ¼ in. from hive-sides, as will be seen by carefully noting directions. The top-bars regulate the distance referred to. 2. The "strips of wood" mentioned keep the outside frames ⅜ in. from the sides and prevent bees from getting out "between the ends."

[3318.] *Loss of Swarms.*—I am a bee-keeper of many years' standing, but a somewhat unsuccessful one. Not that I have failed to follow the advice given by experts of the craft, for when I began to keep the "busy bee" I obtained a "Guide Book" right away, and followed its advice most closely. I also took in the B.B.J., and still feel greatly interested in its contents. I attribute my partial failure less to bad seasons (for no amount of foresight will enable us to escape the consequences of bad weather) than to loss through my swarms taking flight and being lost. I have my bees at some distance from home and my work, and cannot therefore look after them at swarming time, as I would like, and so, when the swarming season comes on, the swarms decamp, and this makes one lose heart and feel inclined to give them up, which I do not want to do, for I like the bees; and I want, therefore, to ask if it is possible to get a good swarm-catcher that would be effectual for the purpose. And in the event of your recommending one, would you kindly give me some advice as to how it should be managed, especially regarding the drones, which I understand get trapped in the "catcher." I deprecate killing these, as I believe their presence is necessary during the summer months to ensure the complete prosperity of the hive. Thanking you in anticipation.—H. Jackson, Co. Durham.

Reply.—The two most effective swarm-catchers at present on the market are those known as the "Brice" and the "Edwards." Either of these may be had from any leading dealer in bee-appliances, who will supply full particulars with regard to using. For the rest, we have had no practical experience of "swarm-catchers," not requiring such aids in our bee-work.

[3319.] *Transferring Bees.* — Being a reader of your Journal I beg to ask your advice with regard to a stock of bees in an old frame-hive. I shall have had them two years this coming spring, and would like to drive them into an up-to-date non-swarming hive. What would be the best time of year, April or May? I send name, etc., for reference, and sign—Co. Antrim.

Reply.—Do not drive the bees at all, set the old hive above new one—minus floor-board, of course—when the bees are seen to become strong enough in numbers to need more room in brood-nest. This should be in April if the stock is doing well, and if lower hive has its frames fitted with full sheets of foundation, the bees will work down into it and transfer themselves below. The old hive may remain on as a super for removal when full, or be removed when all brood has hatched out.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

M. E. Clements (Chirk).—Starting Bee-keeping.—Before you make a beginning by purchasing bees, you should procure and carefully read a "Guide Book" on the subject. No one can learn the art of modern bee-keeping by merely taking in the B.B.J. Then you should, if convenient, join a county B.K. Association if expert help is required to show you how to handle bees without danger. The Hon. Sec. of the Cheshire B.K.A. would no doubt assist in this direction if applied to. He is not far from Chirk. Address: "The Rev. E. Charley, Ince Vicarage, near Chester."

S. T. (Chesterfield).—Honey as Food.—You may dismiss all fear that using honey as food for young children will be harmful. As a matter of fact, honey is one of the most healthful articles of food that children can partake of. It is Nature's "sweet," and in this respect differs from the many harmful sugars used in sweets that children not seldom consume too much of.

A. H. Mawson (Shrewsbury).—Bee Literature.—We presume your reference is to the article, "D. M. M., Banff," on page 42 last week, wherein mention is made of the library of books belonging to the B.B.K.A. These books are available to members at the office of the parent Association, 12, Hanover Square, London, W., or can be had for perusal by members living away from town on application to the Secretary, Mr. Edwin H. Young, at address given above, on payment of postage.

Hartwooo (Ireland).—Honey Sample.—The sample sent has no aroma of honey about it, and we should not like to say it was British honey at all. It has no characteristic flavour, and shows signs of fermentation. We do not call it a good sample at all.

Editorial, Notices, &c.

WILD FLOWERS AND SEA WEEDS.

A UNIQUE EXHIBITION.

We invite the attention of readers resident near town to an exhibition of exceptional interest, the like of which has probably never been seen before in this country. Full particulars of time and place will be found on page v. of our advertising columns, but we add a line—after being favoured with a private view of the specimens—to say that Wild Flowers and Sea Weeds of California, as the collection is modestly called, is a very beautiful assemblage of sea weeds and wild flowers, dried and arranged on large sheets of cardboard. The natural colours are wonderfully preserved, and the sea weeds almost outvie in their beauty of colour the most charming flowers of our gardens. The wild flowers, also, are quite a revelation in their beauty, and the artistic way in which they are arranged and mounted.

The exhibition will be open to the public on the 23rd inst., from 3 to 7 (*vide* advt.), after which hour members only are admitted. The fact of the whole of the specimens being gathered in California by Miss E. C. Cowan, daughter of our senior editor, and that they were dried, mounted, and arranged by that lady, will no doubt induce some readers to pay a visit to Morley Hall, especially when the trifling charge made for admission is devoted to the work of the Young Women's Christian Association, in which Miss Cowan takes an active interest.

REVIEWS.

We have received from the publishers, Messrs. A. and C. Black, London:—

Who's Who for 1904.—Price 7s. 6d. net. This reference book grows every year, and it now has 1,700 pages, and contains over 17,000 biographies, and is a most valuable record of the lives of prominent men and women. The book is full of valuable information from cover to cover, and is alike indispensable to the business and literary man or woman. It is a biographical dictionary to which one may refer at any time with pleasure and profit. Owing to the increasing number of biographies the publishers have issued the tables which were formerly incorporated with "Who's Who" in a separate volume, under the title:

Who's Who Year-book, 1904.—Price 1s. net. It contains all that anyone ordinarily wants of the information found in the various year-books, including much miscellaneous information usually only to be gathered from very many different sources. Here it is seen literally at a glance, and among the contents are tables of pseudonyms, peculiarly pronounced proper names, professors, societies, academic degrees, Government officials, and many others.

The Englishwoman's Year-book and Directory, 1904, price 2s. 6d. net, is another of Messrs. Black's useful publications, and is certainly an indispensable *rade mecum* to every woman who, in these days, takes a lively interest in the education and progress of womankind. The book deserves a large circulation, as no other covers the ground. It gives some idea of the extent of woman's work and interests, and guidance to those who want to help their fellow creatures, as well as improve their own condition. You have simply to turn to its pages to learn what Englishwomen are thinking and doing in regard to subjects that are interesting the world generally. Among the subjects treated we find education, employment and professions, industrial, medicine, science, literature, art, music, public work, home, and charitable institutions, and many others. Every woman wishing to prepare for earning a living or selecting an occupation would certainly do well to study this book.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

AMONG THE BEES.

DISSENTING FROM DOOLITTLE.

[5429.] Generally I accept every statement or even opinion coming from Mr. Doolittle as I would a rule in arithmetic, or as a self-evident proposition in Euclid about which there can be no question or cavil. I have read most of what has fallen from his trenchant and lucid pen; and cordially thank him, on behalf of a large section of the English-speaking race, for the manly, straightforward, and intelligent articles which are esteemed so highly that they regularly appear in our BEE JOURNAL. But on this question of the flight of the bee I must enter a caveat.

Let us see first where we agree. That bees at times travel a long way in search of honey I am aware, from many instances which I have read, and, perhaps better, from many instances which have come under my own experience and ob-

servation. I am, therefore, inclined to advance in his direction so far as to assert that, as a matter of fact, bees forage freely at a distance from their hives considerably beyond what is generally credited, or is written in the books; and that although forage may be abundant in close proximity to their hives. Farmers over three miles from my location assured me many years ago that my bees visited their clover fields in very considerable numbers, and I have since had ocular demonstration of the fact that they freely patronised these fields even when forage was abundant nearer home; and no apparent cause was manifest why they should roam so far afield. I note the same or a somewhat analogous, case yearly when they are working on the heather. A very large proportion, ignoring the nearer stretches almost at their doors, wheel round, making for the heather slopes a considerable distance away. Evidently they instinctively discover that they can load up quicker and with less effort on the richer supply than on the home reaches, where the plant is scrubbier and less luxuriant. Such cases, however, are rare, and, *caeteris paribus*, while bees can go three or four miles, they very rarely indeed do so, but work, as a rule, within a radius of from one to two miles where choice allows it.

I could cite one hundred authorities, all agreeing that while bees can travel long distances, they very rarely do go far from their hives unless under compulsion, but I will content myself with quoting two of the front rank. Mr. Cowan, in his "Honey Bee," says, page 46:—"Observations have shown that they usually work within a radius of two miles from their hives; but if food is scarce they will fly further in search of it, and have been known to go as far as four or five miles." Mr. Root, in his "A B C," says, page 199:—"Bees fly from their hives in quest of stores, perhaps a mile, sometimes a mile and a half or two miles, but they will seldom go beyond these limits unless at a time of scarcity of pasturage." To this last statement Mr. G. M. Doolittle adds a note, 141:—"You know we do not agree here, as I claim they go from three to six miles *from choice*." To this Mr. Root adds a further comment:—"Thanks, but I hardly think I have put the distance too small in the generality of cases." But, always honest and above-board, he later added a foot-note acknowledging that bees from an island *under favourable circumstances* (the italics are mine) travelled a further distance—thus agreeing in his opinion, in almost identical terms, with Mr. Cowan's conclusions.

Bees at Borodino and Banff must differ very materially; for I do not believe my bees would travel, either from choice or necessity, a distance of eight or even six miles for forage. Nay, I go beyond that, and make the positive statement that they would die of starvation with an illimitable sea of bloom just beyond the five-mile radius! Yet Mr. Doolittle makes two as positive statements on the other side; for he considered the "yield was even greater when all bloom was gone up to four miles away than it was during the time when it was near the apiary"; and he asserts that he "had tons of basswood honey stored from a distance of seven or eight miles away." (Till lately he was content with six or at the most seven; now they go *eight*. I have heard it asked if his bees have acquired an added power of flight, or has his own flight of fancy increased?)

I am, however, prepared to give facts. I know of a very fair and smiling valley in one of our most fertile districts, ten or twelve miles wide on the average. Bee-keepers near the centre never get an ounce of heather honey, although the mountains, covered in one mass of bloom, are in full sight but five to six miles distant; and experience, that best of teachers, induces hundreds of these bee-keepers to shift their hives to the hills, generally with the very best results. Further, every single one amongst them who can afford it transports them regularly from a distance of three miles, and many of them from less than *two*. These canny Scots do not incur all this trouble, worry, risks, and expense without a good and sufficient reason; and the reason they will unanimously give is, "The nearer the forage, the more journeys the bees will make daily; and the more journeys the more surplus will be theirs as a recompense for their outlay. I know bees can fly over five miles. Huish a century ago records that he saw bees working on flowers on the Bass Rock, more than four miles from the mainland, and a London gentleman gave indubitable evidence that his bees travelled over that distance to Hampstead Heath. But they very seldom do.

I would sum up the matter thus. Bees in this country may gather driblets from a distance of about five miles. A little further away and they would starve rather than seek necessary food, let alone surplus. I think if I were to ask almost any bee-keeper in the United Kingdom if he would count on surplus with an abundant supply just over four miles away, his answer would be in the negative. Three miles away the supply would be only limited; two miles distant would not yield a full supply. Even *one* mile would appreciably affect the total. Yet Mr. Doolittle makes them go three or

even six miles as a matter of choice; and he even asserts that they would gather as much—his words are "even greater"—from the distant point. Now, my friend, put it to yourself thus: When hay-making can you accomplish as many journeys to your out-fields as you can to those close to your homestead in a given time? Can you carry as heavy a load the longer distance as the shorter? Or, if you say you can, is it done with no more waste of energy and tissue? If not, how can your bees accomplish this impossible feat? A bee can fly ten miles an hour (say twenty if you like), thus taking six minutes to the mile. Your bee going six miles takes an hour to accomplish the journey outward and inward (say they do the whole in two minutes, it does not matter; it is all a question of proportion). My bees, working within a radius of one mile, or two at the most, make *six* journeys in the same time; leaving out the time of loading and unloading in each case, which we will suppose to be equal. But if the homeward journey of the laden bee is against adverse conditions, such as a strong head-wind, then double the time may be taken in arriving at the hive. Work ages bees more than length of days, so I am safe in reasoning that workers dwindle more with the long journey and that they are bound to carry in less honey. So I advise all in this country to trust to location to favour them in coming out at the end of the season with heavy supers. And I have every confidence that in doing so they will be trusting to no broken reed.—D. M. M., Banff.

BEE NOTES FROM ESSEX.

A LEADING TOPIC.

[5430.] The principal among current topics is still the weather. In fact, it may be said that for a whole year now past the weather has been entirely of an unseasonable kind. And yet it has been possible to gather primroses at any time during the whole of the past twelve months. Fruit-trees flowered again in the autumn, in some cases for the third time. We gathered large trusses of honeysuckle in October. We have now exceptionally large quantities of hazel catkins, but the pollen from them is being wasted by the prevalent gales and heavy rains. The song of the missel-thrush, which has been heard here more or less during the winter is now increasing in vigour, and locally this is said to betoken continued wet weather. The song certainly sounds not unlike "Pretty George, pretty George, soak him well! Serve him right."

Helping Others.—From the time when I began to contribute to the pages of the B.B.J. I have replied to numerous letters from bee-keepers in need of enlightenment on various matters connected with the craft, and also had many calls from bee-keepers desiring to see me, often without any appointment having been made. My visitors have included clergymen, farmers, and, indeed, every class have been represented. Such information as I am able to afford was willingly given. So I think you will understand my feelings with regard to the spirit displayed in the letter upon "Leaky Roofs" (No. 5413, page 43). There a bee-keeper says in effect: I have found out a little thing worth knowing, but if you want to know it you must pay for it.

Wasps.—A few days ago I was doing some cleaning up in my storeroom (a back-upstair room), and there found what I had not noticed before. A tiny wasps' nest under the window-blind. It was just the usual little fragile shell, and the first lot of about twelve cells attached to the blind, and later would have hung from the top frame of the window. For an entrance "mother" wasp had eaten a hole through the window-blind. Now as the wasp certainly did not enter the room by the window, she must have started this nest when the door was left ajar for about three days, either passing through another room or up the stairs from the lower rooms.—W. Loveday, Hatfield Heath, Harlow.

QUEEN REARING.

MR. J. RYMER'S METHOD.

[5431.] It is with no small amount of diffidence that I, as a queen rearer for the market, venture to criticise the above. Indeed, when I read the article I was somewhat surprised that the Editor had not pointed out the defect (a serious one) in the method. The weak point lies in the fact that "field bees" are used for the purpose of rearing queens—i.e., bees that have passed beyond the nursing stage of their existence, and they are called upon to do that which, under natural conditions, they would not have to do. Now, according to this method, all the nursing bees are removed to a fresh stand.

One of the first principles of queen rearing is to see that there is an "abundance of bees of the right age" to undertake the nursing of the royal larvae, and by adopting the following method these will be secured:—Take three of Mr. Rymer's nucleus hives. In one will be placed two combs containing some honey and pollen. Call this one A. Then take two of the strongest you have, call these B and C respectively. Ten to twelve days before you want to begin operations give B frames of hatching-brood from other nucleus hives (not from C) in exchange for brood in B, which is not

so far advanced. At the end of ten to twelve days this hive will be ready for the operation as follows:—1. Dispose of the queen. 2. Place A on the spot on which B has been standing. In A place the two combs of honey and pollen, and between them place the frame of eggs first hatched, as mentioned by Mr. Rymer, only the frame should have been placed in the selected hive for breeding from three to four days before the operation (two days not long enough), as the eggs should be far enough advanced for the earliest of them to be hatched. Now shake all the bees off the combs in B into A, and place B on the top of C, for the bees in C to care for the brood till again required.

Now let us consider what is happening in A? All the nurse bees that had been feeding brood in B are now deprived of all, except the just-hatched larvae, and they have the food secreted ready to feed them. (This is one point where it is ahead of Mr. Rymer's plan as the returning field-bees have to set to work to secrete the "chyle" to feed the larvae, not having any ready.) It would be an advantage if the frame containing the larvae was not full of eggs—merely a patch such as would be laid in a sheet of foundation.

As soon as the cells are sealed the brood, that was given to C to care for, should be returned to A, and three days before the cells would be due to hatch, another frame should be set for a fresh supply of eggs. Having disposed of the cells we are now ready to operate on C in a similar manner, using the now empty hive B in the same way as A was used. The brood in C will be given to A to care for—only this time introduce C's queen at the same time. When the second batch of cells are ripe, A will be ready for another operation.

This is not the plan I adopted for rearing queens for the market, as it is too slow where queens are wanted in quantities, but the fundamental principle is the same, namely, the securing of the right bees to do the work.

If the Editor cares to reproduce the photos, I shall be pleased to send them later on when queen-rearing is in full swing.—D. G. TAYLOR, Ilminster, February 15.

[We will be very pleased to see the photo and will have it reproduced if suitable.—EDS.]

COUNTING BEES BY CUBIC MEASURE.

[5432.] It would be interesting to know the number of bees per cubic inch in a swarm cluster. On June 30 of last year I found a vagrant swarm clustered near my apiary which certainly must have contained from 2,700 to 3,000 cubic inches, the greatest dimensions being 26in. deep, 20in. wide, and 10in. thick. I have scarcely ever seen a swarm, for my own bees never swarm, and I commenced bee-keeping with two vagrant swarms, which hived themselves. I think the above swarm-cluster could fairly be called "fine and large," for the bees seemed to almost fill nine frames with honey in 24 hours. I had over 40lbs. surplus from them, besides leaving eight frames full of stores. This, too, between June 30 and Bank Holiday, giving about 18 fine days at most. Would it be too high an estimate to compute them at 20 per cubic inch? Perhaps your correspondent, "D. M. M., Banff," will give us his ideas on the question?

It would interest many readers to know what is the value Mr. S. Darlington (who writes on page 57) puts on the time and paint, etc., in making his hives. I, too, have made a number of hives from Tate's No. 1 cube-sugar boxes, and when well painted they answer quite well. But the extra time in making is of far greater value than the difference in the value of new and suitable wood, and when finished the difference is still greater. For the hive made of suitable wood may be worth 20s. to 25s., and that made from packing-cases will never be worth more than 4s. or 5s.; probably less. Give me a good hive, which is "a thing of beauty and a joy for ever." I send name, etc., and sign—PRACTICAL EXPERIENCE, Wavenden, Bucks.

(*Correspondence continued on page* 66.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

For a bee-keeper who made a rather unpromising start in the craft less than two and a half years ago, our friend Mr. Russell has made amends for his bad beginning, judging from the apiary seen on next page. We need add nothing to the full details of his progress. He says:--

"In reply to your request for a few 'notes' on my bee-keeping experience, I should have been more at home in writing on the floral world, seeing that my oldest 'hobby' is growing and the hybridising of such flowers as carnations, etc. But as bees have quite an affinity for flowers I have no doubt we shall soon be friends, and so, having added bees to my hobbies, it seems meet that I should report my mistakes in order that beginners in the bee line may profit by my errors. The main point, then, that I lay stress upon is to begin by carefully reading and then carrying out the instructions plainly given in the

'Guide Book.' Had I personally followed this course my start would not have opened with a chapter of accidents. In September, 1901, my son had a driven stock of bees given him, and it was soon evident that I had quite a number of 'professionals' at work fertilising the carnations in my greenhouse; but while I much admired the ardour with which the busy little bees worked on the blooms, I wanted them to keep outside the glass, fearing that in their busy haste they would hardly carry out my own plans with regard to cross-fertilising; but the bees thought otherwise, and, in consequence, they are now treated as 'trespassers' whenever caught under the glass. I 'turn them out' by slipping

MR. JNO. RUSSELL'S APIARY, KEYINGHAM, HULL, YORKSHIRE.

an empty match-box (open to its full extremity) over the bee close to the glass; then slide the box close, and the bee is a prisoner for carrying outside. This 'tip' may be useful to bee-keepers who possess a greenhouse. I next bought two lots of bees which a neighbour kindly put on a number of combs in a hive for me. I fed the driven bees the same night, and carelessly left the top partly open. Next morning the garden was full of bees, and 'robbing' was in full swing. All round the hive, and on the ground, hundreds of bees were fighting, and the dead lay in little heaps. I left them to finish their quarrel among themselves, remembering the old axiom about interfering in family quarrels. Result: about a cupful of the fighting driven bees left alive. I immediately bought other two lots of 'condemned' bees from a bee-keeper in an adjoining village, intending to add them to my cupful of conquerors. I expected to have the bees delivered to me in the two empty skeps I took with me. But judge of my surprise when he said, 'There they are, the second and fourth lots in them frame-hives.' Fancy this to one who is afraid of bees, as I then was. It was like a general pointing to the Rock of Gibraltar and saying to a private, 'There it is; take it!' I frankly own I was a coward at that time—a veritable coward with bees. But the job had to be got through; so I bought a pair of rubber gloves, borrowed two veils and a smoker, and taking one of my sons with me (he had watched a neighbour driving bees), I went to work, giving them a big dose of smoke both at the entrance and under the quilts; then I turned up a little of the quilt and gently lifted out the first frame beeless; the next frame lifted had on it four or five bees; the third quite covered with them. Not knowing how to get these bees off and into the skep, I put them back, as they were getting 'lively,' and I felt like retreating. 'Let me try,' said my son, which I was so glad to do, so I worked the bellows. He took out the frame and bees, and holding it over the skep gave the frame a violent shake

downwards. Some dropped off, and some didn't; so we borrowed a goose wing, and he swept the bees from each comb; but they didn't like it, and got vexed. Suddenly he dropped a frame as if shot. 'What's up now?' said I. 'They are up the leg of my pants!' Well, I had a few shot-marks on my legs and arms, but I never let on. Then the bee-keeper came and shook the remaining bees into our skep without any further stinging, and we tied them up and away for home. After this I looked at the 'Guide Book,' and saw by the illustrations therein (how bees are driven and hived). I placed board and sheet in front of a new 'W. B. C.' hive, and shook the contents of the two skeps altogether on to the sheet, not forgetting to give them a good dredging with flour as they got mixed up, and, wonderful to relate, the bees all commenced to run in like an army of soldiers. So I fetched the wife and family to come and see 'how we could subdue bees'!

"I fed these up, and they made a strong stock later on. I now bought three skeps and two frame-hives; fed bees well, and during the winter we made nine 'W. B. C.' hives complete. In the following spring I put each of the skeps on top of ten frames. The first three hives in photo have skeps on combs inside outer cases; the remainder are on combs. The small hive to the right we made to hold two nucleus colonies, an entrance at each end.

"The district of Holderness is a very fair one for honey. We have fruit orchards (our photo is part of one), with a few mustard fields and a good quantity of white clover pasturage. I have two neighbours who are old bee-men, one having 50 stocks and the other about ten. If all bee-keepers are like these two we must have the cream of the country for bee-keepers. They have kindly given me every assistance and advice, and this autumn I have driven about nine lots of condemned bees, and have used them to strengthen my stock. The season of 1903 was a failure here. First with the early frosts, then with the wet, the fruit blossom was completely lost, and the clover bloomed plentifully, but the rain kept the bees at home. I bottled 150lbs. of honey from the seven hives seen (the eighth being a nucleus), and won two second prizes for run honey. They gave me five swarms, so I have now twelve strong stocks all fed up—last September—to start the year 1904. To the readers who would keep bees, but are afraid of them (no, I mean of themselves), let me say you could not be more afraid of being stung than I was. But buy the 'Guide Book,' read first about what you wish to do with your bees—not what I first did—then you can manipulate your bees in safety, and wonder at the simple mistakes made."

CORRESPONDENCE.

(*Continued from page* 64.)

BEE-NOTES FOR FEBRUARY.

"OWNER'S RISK" RATES.

[5433.] Taking advantage of a recent fine day, one of only two or three we have had for a long time, I made a hasty examination of my six stocks of bees; several were badly in want of food, but by equalising the stores (two of the hives had so much in as to bear two frames out of each), and putting candy over the feed-hole I have made them safe for at least six weeks to come, when surely we shall have suitable weather to make a more careful examination.

In reference to Mr. Belderson's appeal for evidence (5422, page 56), may I state an experience of my own? I had, last September, three dozen sections sent me from Yorkshire at "owner's risk," well packed they were, and two big labels, lettered in red ing, "honey, with care," were pasted on lid of case. I happened to be at the station when they arrived, and on noticing that the box was leaking signed for them accordingly. On getting the case home—and it was a messy job carrying it on my bicycle three-quarters of a mile—an examination showed that every section but one was damaged; in fact all but six were literally smashed. I saw the agent at the station, and got him to come and see them. His comment was the case must have had cruel treatment. I showed him my receipted invoice for the sections, and duly sent in a claim for what they had cost me. Yet, after months of delay, the railway company decline to recompense me, as they say the goods travelled at "owner's risk." Now I happen to be an old railway servant myself, and as fully conversant with their regulations as the manager who instructed the agent here to deliver me that message. The regulation in question says they will not be responsible (when travelling at owner's risk) for loss or delay to goods, or damage except by wilful neglect or carelessness on the part of their servants. I pointed out to the company the fact that I had not put in an inflated claim, charging only what the sections had cost me, and also that by their own agent's admission the damage had been done by wilful carelessness; but I have so far had no satisfaction.

I cannot at present afford to fight the matter in the courts, but from my own experiences whilst on the railway I am confident the case could be won on the evidence, as strictly the clause, "owner's risk," does not cover nearly so much as the railway companies would like to assert,

but is meant mainly as regards accidents to trains, fire, or other "acts of God."

I consider bee-keepers should band together and make a test case, so as to ascertain exactly how we stand, not necessarily of my case, because I have reconciled myself to the loss of the 25s. 3d. To any such fund as may be started I would gladly subscribe my mite. I enclose name.—EBOR, Dunham Valley, February 11.

"OWNER'S RISK" RATES.

[5434.] Referring to Mr. W. Woodley's "Notes by the Way" (page 52), I think he has been wrongly informed as to owner's risk rate for honey from shows. I have done practically no "showing" for the last year or two, but I was always able to get honey returned from show when I was there to pack and book it myself. My honey in this way, has also, as a rule, been returned at owner's risk from shows in connection with the Notts B.K.A. I fail to see any reason why the rate should not apply to honey returned from any show. Should I do any showing in the future the return label will be plainly marked "owner's risk," and I shall refuse to pay any higher rate.—J. HERROD, Sutton-on-Trent, Newark, Notts.

CAMBS. BEE-KEEPERS' ASSOCIATION

[5435.] I am delighted to see in last week's BEE JOURNAL that "Old Roger's" letter has elicited some response from other bee-keepers in Cambs., and that they all agree with regard to the desirability of either putting the Cambs. and Isle of Ely B. K. Association on a firm basis, or starting an entirely fresh organisation. That something should be done, and that quickly if we are to do any good this coming season, is the opinion of all bee-keepers that I have spoken to on the subject. I have no doubt that we shall get well supported both numerically and financially; indeed, I have been promised, should it be decided to start another association, very substantial support.

I wrote to the B.B.J. regarding the above some time since, and the editors called my attention to the existing association, which, until then, I thought was defunct. I then wrote to the secretary, Mr. C. N. White, and he promised to meet me in Cambridge early in January, but as the weather has been so bad I presume he did not care to face the elements.

What I would suggest is that all actively engaged in bee-keeping should meet and discuss the question of what is best to be done. If, in the opinion of those present a public meeting should be called, we could then decide time and place, and make arrangements accordingly. If this suggestion is agreeable to your readers, and they care to drop me a line, I will arrange to let everyone know time and place, which I would suggest be held on a Saturday, of such meeting. Perhaps Mr. White would attend, as personally I should not like to do anything antagonistic to the present association, should that body decide to continue, but I would most strongly urge them to bestir themselves as a quiescent association is worse than no association at all, and it is only by associated effort that we are likely to benefit the bee-keeping industry in Cambridgeshire. Apologising for writing at such length.—CHAS. J. MAPEY, Cherry Hinton, Cambridge, February 13.

[5436.] I was pleased to see in the B.B.J. of February 4 a letter referring to the local bee-keepers' association. I really thought it had died out. I myself would be pleased to join the association if it was to be re-started. Surely there are plenty of bee-keepers in this large fruit-growing district as would be able to keep it going? Hoping to soon seen it re-established, and in a flourishing condition, then I shall feel inclined to think that it will "come to stay." I send name for reference.—CHAUCER, Cambridge, February 15.

THE TWINS.

A "MORAL" THAT ADORNS THE TALE.

[5437.] If you can find space for this little contribution it will express the feeling of a number of bee-men in this locality.

"Two little boys, named Piney and Resolute, stood in an orchard looking up at the bright, rosy apples overhead. The boys were twins, but very unlike one another in energy and resource; both wished very much for some apples, but they were not tall enough to reach them.

At last Resolute said, 'Come on, Piney, let us fetch a ladder.' But Piney was far too idle, and preferred to stay and gaze at the fruit up above.

Resolute came struggling back with a ladder, and was soon munching the lovely fruit. Upon this Piney ran crying and whining to his mother, who came out to see what was the matter. She was a wise mother, for when she had heard the facts of the case she said, 'Resolute took the trouble to fetch the ladder, and so he gets the apples. If you, Piney dear, want the apples you must fetch a ladder for yourself. Of course, if Resolute will let you have his ladder that is his affair.'"—ERNEST HART, Thoresway, Caistor, Lincs., February 11.

UNFAIR DEALING.

[5438.] We take the BEE JOURNAL regularly, and I some little time back saw a letter from a subscriber who complained in your pages about the unfair treatment he got from an advertiser from whom he ordered some frames of built-out combs, which, after long delay, arrived broken up, owing to bad packing. We are new beginners at bee-keeping, and last year had a hive stocked with bees given us. Later on, in autumn, we bought another hive, and a friend offered to get us some driven bees to stock it with; but before doing so told us to get a dozen standard frames and comb foundation to fit them with, preparatory to hiving the driven bees on them. We therefore ordered the frames and 1lb. of weed foundation from a dealer (whose name I enclose), and sent cash for same; but I have never had a line of reply to say the money was received, nor have the goods been forwarded. I afterwards wrote twice asking for an explanation, but no notice whatever has been taken. When the bees came we had to get some frames of comb from a neighbouring bee-keeper to hive the driven bees on. I think it a great pity that such unfair dealing should be possible; it does much harm to the industry, and disappoints beginners with bees very much.—(Mrs.) E. GRAYSON, Bythoms Farm, near Sheffield.

[The dealer whose name you send has not advertised in our pages for some time past; nor do we suppose that any of our regular advertisers are capable of such unfairness, or, to use the proper term, dishonesty. You will, no doubt, get fair treatment from all leading appliance dealers.—EDS.]

Queries and Replies.

[3320.] *Foul Brood: Its Nature and Method of Treatment.*—Will you kindly inform me in next issue of your paper if there is any known method of checking foul brood while the sections are on the hive, besides the use of naphthaline? Would phenol or carbolic acid, injected into the hive be effective? and, if so, what quantities should be used, and should they be diluted or not? In this district it is a waste of time to disinfect the hives in the usual manner, as the neighbourhood is full of foul brood, and my bees would be reinfected by robbing diseased hives in a week or two, and it is hopeless to get the cottage bee-keepers to move. By using medicated food and naphthaline I have kept the disease in check, but it always breaks out, though generally in a mild form when feeding ceases, and I want a plan, time being no object, which will tide me over the four summer months. Trusting you may be able to assist me with your valuable advice, I may add that I have starved my bees and boiled my hives with the above result. I send name for reference.—A BEEIST, Dumfriesshire.

REPLY.—With every desire to render help in the effort to combat foul brood among bees in a district so badly affected as that referred to we may very aptly quote your own words and say, "it is a waste of time" for anyone to hope for success unless they make themselves more or less acquainted with the nature of the disease being dealt with. A long and comprehensive chapter is devoted to the subject in the "Guide Book," which may be read with advantage, wherein we are told that the micro-organism known as foul brood, though not difficult to deal with, while in the bacillus stage, has under certain conditions the power of forming spores—representing the seeds—which, under certain conditions, will germinate into bacilli, and thus the disease breaks out again as actively as ever. The only real remedy, beyond keeping the disease in check as stated above, is to get rid of the spores, and this is a most difficult task. Freezing or boiling will not destroy the spores' vitality, and as for phenol, carbolic acid, naphthaline, or even perchloride of mercury, all of which when considerably diluted will prevent the growth of bacilli, they have no effect whatever on the spores. The full description and method of treating bees and hives affected with foul brood is, of course, too long for this column, but it should be perused by all who have in view the treatment of bees affected by it.

[3321.] *Using Honey from Diseased Hives.*—I have some dark honey taken last year from a hive that I treated for foul brood. Will it be safe to use this for spring feeding if well boiled? Thanking you in anticipation of reply.—A. L. N., Wembley, February 11.

REPLY.—According to scientific authorities it is not safe to use honey from combs affected with foul brood as bee food unless the boiling is continued for something like two hours. For ourselves, we should prefer making assurance doubly sure by burying the honey referred to a foot deep in the ground and using wholesome cane-sugar for syrup making.

[3322.] *Moving Hives in February.*—Will you please tell me what is the safest way of moving three hives of bees to a distance of about six miles? The plan of putting them on a floor-board with aperture covered with perforated zinc will prob-

ably not do for this cold weather. I may also say the frames are not "wired," and to take out each frame and tie the combs in would, I should think, do more harm than good. I thought of simply putting a piece of perforated zinc over the entrance and tying the floor to the body-box, but in any case the hives must be moved without delay. A reply in B. B. J. will greatly oblige.—G. T. WALDEN, Wimbledon, February 12.

REPLY.—The "safest" way would be to carry them on a hand-barrow in the evening; but if hives are safely secured to their respective floor-boards, and the frames fixed firmly to prevent their swaying about, they should travel safely on a light spring cart. The bee-keeper should, however, accompany the driver to ensure the needful care and avoidance of jolting on the journey. Remove all quilts but the one next the frames, and cover entrance with zinc, as proposed.

[3323.] *Making the "W. B. C." Hive.*—Kindly say through B.B.J. inquiry column what wood I should ask for at the timber merchant's for making "W. B. C." hives? If you cannot say, perhaps some of your numerous readers and users of this "up-to-date" and very handy hive could advise me what width and quality of board cuts up to the best advantage? I have never seen this query in B.B.J. and am sure it would interest many readers. I send name, etc., for reference, and, thanking you in anticipation, sign—"88," Co. Antrim, February 12.

REPLY.—Assuming from the above query that you already possess the recently issued new edition of the "Practical Note Book," we may say that on page 60 Mr. Peebles—who is a practical joiner—in his description of how to make the "W. B. C." hive on his plan, names the wood he uses and all particulars. Other makers of repute use yellow pine of the thickness mentioned on pp. 55 to 59.

[3324.] *Home-made Hives.*—Referring to the "W. B. C." hive, I quite agree with you that the body-box can be worked both ways, as stated on page 59, and that metal runners do not regulate the distance of frames from sides. But I fail to see what prevents your bees from getting through at end of frames between body-box and shallow frame crate by using $\frac{3}{8}$in. metal ends, unless the ends of brood-frames are covered in. As I find, by the shallow-frame box standing on the body-box, you have a $\frac{1}{2}$ in. space between top of brood-frames and bottom of shallow-box at front and back. I may say my metal runners are on an acute angle; should they be at right angles? Being a novice, reply to same will greatly oblige. —E. P., Anxious, Gravesend, Feb. 15.

REPLY.—We cannot make out exactly what is meant by your "metal runners being on an acute angle," and asking "should they be at right angles?" It is plainly evident there is some confusion in your mind about "metal runners," and the fact of your never having used or seen them before—as stated in former letter—makes it difficult for us to reply. Can you not send us one as a sample?

[3325.] *Bees Visiting Hot-Beds in February.*—For the last few days I have noticed that my bees, whenever they are out, crowd on an old hot-bed of last year. 1. I should be glad if you can tell me what satisfaction they can get out of it; is it salt or ammonia? for it cannot be simply the moisture—there is plenty of that anywhere else just now. 2. Some one asked in your JOURNAL if bees frequent the red-plum blossom. I can say that mine last spring were very busy on damson blossom for some days.—G. H. F., Canterbury, February 15.

REPLY.—It is known that bees sometimes visit places such as that named, no doubt with the object of carrying off (for domestic purposes) the saline properties contained in the moisture. This is one reason why it is considered advantageous to add a small quantity of salt to syrup-food for bees.

[3326.] *"Weeping" Sections.—Disinfectants for Foul Brood.*—May I trouble you to let me know through the medium of the B.B.J. :—1. The reason of some well-filled sections taken off last August "weeping," i.e., the honey running out and the face of the sections becoming darkened by the honey coming against the cappings, in some cases all over the face, in others partially? The cappings have not been damaged and sections kept right side up and kept in a dry shed, perhaps somewhat cold. They are well sealed. 2. What is the correct strength of solution to use of mercury bichloride or corrosive sublimate (in crystals) as a disinfectant against foul brood in the case of infection of one's hands or utensils, etc., touched? Thanking you in anticipation and also for the great assistance I have received from the B.B.J.—H. B., Kent, February 4.

REPLY.—1. The trouble you complain of is caused by thinness of capping to the cells. It is known that the various races of bees differ very considerably in the way sections are filled and capped over. The native bee is in this respect superior to most of the foreign varieties introduced into this country. 2. If you decide to use bichloride of mercury at all as a disinfect-

ant, procure it in the tabloid form sold by all chemists, and very largely used by medical men in attending maternity cases. This is the most effective form, but it also needs great care in using.

[3327.] *Eggs in Combs Failing to Hatch Out.*—As a reader of the B.B.J., may I ask for some information on the following? I captured a runaway swarm, and, after getting the bees home, I put them in a clean wooden hive. They seemed to go on working for some time all right, but, never noticing any young bees hatch out, I became anxious about them as the stock gradually became weaker in numbers. I therefore decided to have a look to see if there was a queen in the hive and very soon found her. I also noticed eggs in the cells (two and three in some cells), but they never seemed to hatch out, and, in consequence, the bees naturally never sealed the cells over. I could do nothing to mend matters, and the bees lingered on till a little while back, when they gradually died off, the queen remaining alive till nearly the last. I am therefore sending you a sample of the comb and ask if you will say if there is any disease in it? Or would it be on account of the queen getting old? I should not like my other bees to get any of the honey if there is disease in the comb, and there is a good weight of stores. I shall burn it all up if you advise me to do so, as I have eighteen colonies, all of which are strong. I am also sending you a piece of comb with the eggs in it.—F. Busby, Tring, February 15.

Reply.—The comb sent shows plainly that it has never had a single bee reared in it, the failure to hatch apparently arising from lack of warmth. There are a few cells partly filled with mouldy pollen, showing that the bees have made preparation for brood-rearing, but such comb affords no help in diagnosing disease. The inference is that the food in combs will be safe to use as bee-food.

LORD AVEBURY'S EXPERIMENTS WITH ANTS.

The extraordinary variety of Lord Avebury's pursuits can only be accounted for by the belief that he has assimilated the habits of the bees, which he loves so well. The ants also are great favourites with Lord Avebury, who more than twenty years ago set apart one of his rooms at High Elms for the use of his tiny friends, and in this room thousands of ants have lived and died. Wishing to see how ants would treat drunken members of the community, he tried to induce twenty-five ants from one nest and twenty-five from another to take sufficient alcohol to make them intoxicated. But they would not touch it, so Lord Avebury immersed these fifty pugnacious teetotalers in an alcoholic bath until their demeanour showed their condition.

Then this body of debauched insects were placed in one of the nests and developments were awaited. Retribution was sharp and summary. The respectable inhabitants of the nest carefully examined each of the drunkards, and having picked out the twenty-five strangers, dropped them one by one into a neighbouring water-butt. But the remaining twenty-five ants, who were their own kith and kin, they carried to a remote part of the nest and left them there to sleep themselves sober.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

*** Mr. J. Briant, Oak Tree Apiary, Andrew-road, Cogan, Penarth, writes:—"In reply to Mr. John Kibble, Charlbury, (5427, page 58), will he please write me to above address and oblige?"

J. P. (St. Anne's-on-Sea, Lancs.).—Using Queen Excluders.—Our own preference is for queen-excluders. Indeed, when working shallow-frames for extracted honey we deem excluders indispensable. On the other hand, many good bee-men dispense with them when working sections. Queen-excluders—or "honey-boards," as they are called—are in almost general use among the large honey-producers of America.

S. B. (Whalley Range).—Employment on Bee Farm.—The only way we know of in which you might obtain a situation as desired is by advertising in our prepaid column.

"Old Boots" (Barnsley).—Joining B.K. Associations.—The names of all bee-keepers' associations, with addresses of hon. secretaries, is now published in each issue of our monthly, the *B.K Record*, of which we are forwarding you a copy. There are several associations in your county of Yorks, and you will be able to communicate with the nearest hon. secretary to your district.

A. R. L. (Reading). — Candy-making. — Your sample is very good indeed; in fact, except for a very slight want of smoothness in grain, it would be perfect.

B. H. S.—The sample is very good in all respects, and you may now claim to have found out the secret of candy-making.

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

The monthly meeting of the Council was held at 105, Jermyn Street., S.W., on Wednesday, February 17, Mr. T. I. Weston occupying the chair. There were also present Dr. Elliot, Messrs. W. Broughton Carr, H. Jonas, J. B. Lamb, W. F. Reid, E. D. Till, and the secretary. Letters apologising for enforced absence were received from Mr. T. W. Cowan, Mr. R. T. Andrews, and Mr. C. N. White.

The report of the Finance Committee, presented by the chairman, gave particulars of receipts and expenditure to date, and was approved. The statement of accounts for the year 1903 was also submitted to the council.

An application for affiliation of the "Lady Warwick College" was considered, and the secretary instructed to communicate with the Warwickshire Association on the matter.

Correspondence with the secretary to the Fruit Committee of the Board of Agriculture was read to the meeting—as also a further letter from the secretary of the Cumberland B.K. Association, re foulbrood legislation.

The Special Committee on "Examinations" brought forward their suggestions in the form of a lengthy report, which was partially dealt with, and adjourned for final decision at a future meeting.

It was decided to hold the annual general meeting of members on Thursday, March 17th, to be followed by a "conversazione" as usual.

LANCASHIRE B.K.A.

ANNUAL MEETING.

The annual meeting of the Lancashire Bee-keepers' Association was held at Preston, in the hall of the Preston Scientific Association, on Saturday, February 20. There was a good attendance of members. In the absence of the president, Sir Alfred Jones, K.C.B., Mr. George Rose, of Liverpool, took the chair. The report of the year's work showed that the membership now reached between 300 and 400, and new members were constantly joining, despite the bad season of 1903, during which year the weather had been so continuously adverse that though several experts were at work it was found impossible to visit all the members. Many lectures and demonstrations have been given in various parts of the county, and honey competitions arranged for at numerous shows. Two examinations for the experts' certificates of the B.B.K.A. had been held, at which several candidates secured a good "pass." A spirit of hopefulness pervaded the meeting throughout, and with a small balance in hand it was unanimously decided to go forward again this year with the philanthropic work of spreading the practical knowledge of bee-keeping among cottagers and others throughout the county, thus increasing the "fruits of the earth" of every kind, and giving to men and women who live in the country an interesting and health-giving occupation that will bring grist to the mill and help to pay the rent. After the business of the meeting was over an interesting conversation took place as to new methods of dealing with the diseases of bees, and at the evening sitting Mr. George Rose lectured with lantern illustrations to a large audience on the garden city scheme, with special reference to "The First Garden City" now being established in Hertfordshire. Considerable discussion was elicited, and invitations received to repeat the lecture in other parts of the county.—(Communicated.)

GLAMORGAN B.K.A.

ANNUAL MEETING.

Alderman T. J. Hughes presided over the annual general meeting of members at the Town Hall, Bridgend, on February 18.

The minutes of the previous annual meeting were read and signed.

Letters expressing regret for inability to attend were read from Major-General H. H. Lee, R.E., Watkin Lewis, Esq., J.P., Dr. De Vere Hunt, F.R.H.S., the Rev. M. Evanson, John Jenkins, Esq., A.C.A., and others.

The chairman, in moving the adoption of the report, already in the hands of members, said the reputation of the association for good work was recognised throughout the county, and that he would continue to do what he could to further the objects of the association, which undoubtedly was in a vigorous and robust condition.

In proposing the acceptance of the balance-sheet, which showed a balance in hand of £12, the chairman said that the County Council were so very pleased with the way their grant of £50 had been spent that for the current year the grant would be increased to £75. They were, he said, bound to admit that the money had been well and wisely utilised, and the healthy condition the association enjoyed was very largely due to the energy and zeal of their honorary secretary.

The Right Hon. Lord Windsor, P.C., Lord Lieutenant of the county, was re-elected president. The vice-presidents are: Miss Talbot, Miss Baden-Powell, Lord Tredegar, A. W. Morris, Esq., Sir J. T. D. Llewelyn, J.P., Sidney Robinson, Esq.,

J.P., Col. H. Oakden Fisher, J.P., D. T. Alexander, Esq., J.P., Major Bell, E. W. M. Corbett, Esq., J.P., Col. H. H. Wyndham-Quin, C.B., D.S.O., M.P., Clifford J. Cory, Esq., J.P., Dr. De Vere Hunt, F.R.H.S., W. Henry Lewis, Esq., J.P., the Mayor of Cardiff (Alderman J. Jenkins, J.P.), Col. J. P. Turbervill, J.P., J. Grimes, Esq., F.R.H.S., Principal Griffiths, M.A., Sc.D., F.R.S., W. H. Lewis, Esq., Major-General H. H. Lee, J.P., O. H. Jones, Esq., J.P., and Godfrey L. Clark, J.P., who have consented to act.

A general committee was appointed and an executive committee comprising Messrs. R. T. Duncan, J. O. Jones, C. J. Jenkins, J. Boyes, G. H. Mitchell, R. Morgan, Dr. Trow, Robert Thomas, F. Gravil, and H. J. Randall; hon. auditor, Mr. John Jenkins, A.C.A.; hon. treasurer, Mr. W. T. Watkin Lewis, J.P.; and hon. secretary, Mr. Wm. Richards.

A unanimous vote of thanks was passed to the retiring officers for the excellent work performed by them during the past year. The secretary, in replying to the vote, said that the undoubted success achieved was the result of hearty support and sympathy received from all quarters. The local secretaries, too, had performed noble service.

Mr. Duncan and Mr. Watkin Lewis were appointed representatives to the B.B.K.A. conferences in London.

Cordial votes of thanks were passed to the Glamorgan County Council for their increased grant, and to the Cardiff and County Horticultural Society.

For the executive committee the secretary proposed a number of alterations and additions to the rules, and they were all agreed to.

The business over, a lecture entitled "Novices in Bee-keeping" (illustrated by lantern views) was given by the secretary.

The customary votes expressing gratitude terminated the proceedings.—Wm. Richards, Hon. Sec., Gabalfa, Cardiff.

NOTTS. BEE-KEEPERS' ASSOCIATION

ANNUAL MEETING.

The annual meeting of the Nottinghamshire Bee-keepers' Association was held on Saturday, February 20, at the People's Hall, Nottingham. Mr. W. S. Ellis presided, and among those also present were: Mr. and Mrs. George Hayes, Mr. and Mrs. R. J. Turner, Messrs. P. Scattergood, W. Herrod, A. G. Pugh, S. W. Marriott, T. N. Harrison, T. Maskery, Puttergill, Skelhorn, Mr. and Mrs. R. Mackinder, Mr. and Mrs. T. Manchester, and many others.

The balance-sheet showed that the receipts had amounted to £116 3s. 4d., and there was a balance in hand of £1 14s. 2d.

The annual report of the committee showed an increased membership, which now stood at 185, as compared with 150 a year ago. Another matter for congratulation was the fact that the balance-sheet showed something to their credit, which it had not done for several years past. Expert work last spring was delayed by the bad weather, but out of 189 apiaries visited, comprising 754 hives, only 25 were found to be infected with "foul brood," which was very satisfactory. The Notts. County Council had reduced their grant by £10 last year, owing to increased expenditure in other directions, but the committee hoped the grant for 1904 would be increased to £60. The Nottingham City Council had resumed their grant for this year. The attention of the members was invited to the grouping of counties at the "Royal" Show in June next, with the hope that more of their members would enter for the prizes that "had to go begging" in 1903 through lack of competitors. Three members had secured the third-class honours as experts, viz., Messrs. R. J. Turner, W. Darrington, and D. Marshall. Votes of thanks were passed to the County Council and to the City Council for their grants for the furtherance of the knowledge in bee-keeping; to their president for the substantial help he had given to the association, to the vice-president, and to the various donors who had assisted them, not forgetting the very valued help of some of the district secretaries.

The report and balance-sheet were adopted.

Lord St. Vincent was re-elected president by general acclamation. The vice-presidents and committee were also re-elected.

Mr. P. Scattergood was re-elected auditor, and cordially thanked for his past services, Mr. Hayes being the recipient of a similar compliment upon his reappointment as secretary. Messrs. Hayes and Pugh were re-elected delegates to the British Beekeepers' Association.

In the evening a social gathering took place, presided over by Colonel L. Rolleston, and a very enjoyable evening was spent.

The meeting was concluded with the usual prize drawing for hives, etc., etc.

Obituary.

CAPTAIN J. E. HETHERINGTON.

We regret to record the death of Captain J. E. Hetherington, of Cherry Valley, New York. Captain Hetherington was the most extensive bee-keeper in the world, having

for more than twenty years apiaries numbering over 3,000 colonies of bees. He was born January 7, 1840, in Cherry Valley, where he resided up to the last. After having distinguished himself as captain of sharp-shooters in the Civil War between North and South, being three times wounded, he was discharged incapacitated from his wounds, and his name was sent up to the War Department as one of those distinguishing themselves in the campaign. On retirement, he devoted himself to bee-keeping, becoming very soon one of the most advanced bee-keepers in the United States. We had the pleasure of visiting Captain Hetherington in 1887, and stayed some days with him. At that time he had twenty apiaries situated at distances of two or three miles apart, in a radius of twelve miles, so that the greatest distance he had to go from home was twelve miles. He and his brother managed the whole of these apiaries, having several men under them. We were there during the hours of business, which commenced at 5 o'clock in the morning, and saw all the working. The men went round from hive to hive, and took off rack after rack, which, in hives with three storeys of sections, were promptly examined and removed, if necessary, and in this way 100 to 150 racks of sections were taken off and carried away. Captain Hetherington produced the largest quantity of honey in the States. He was amiable and of a retiring disposition, not prone to puff himself, and did not write for the papers, so that his name seldom appeared anywhere in connection with honey-raising, but for all that he was one of the most advanced bee-keepers, and the largest producer of honey, with less fuss than we have ever seen. He had then been at this work for over thirty years, always keeping a little ahead of the generality of bee-keepers. As a good business man, he knew how to gratify the popular taste, and therefore he had no difficulty in selling his large quantity of honey. He used a modification of the Quinby hive, which he had improved to suit his requirements, and was the first to make close-ended frames practically useful. Amongst the many improvements he introduced we would mention wired foundation made by Van Deusen, and the transparent foundation for sections, both with flat bottoms and thick walls. Captain Hetherington's difficulty was always in wintering, and although he moved all his hives into cellars, in some years he lost as many as 90 per cent, as Cherry Valley was situated in a snow belt and was exceptionally cold. We shall always look back with pleasure to our visit to Captain Hetherington, and extend his family the sympathy of bee-keepers in their bereavement.

E. DE MERCADER-BELLOCH.

We also regret to have to record the death of E. de Mercader-Belloch, proprietor of *El Colmenero Espanol*, published in Barcelona, Spain. M. de Mercader-Belloch was President of the Spanish Apicultural Society. In 1888 he translated the "British Bee-Keepers' Guide Book" into Spanish, and for many years did much to promote modern methods of bee-keeping in Spain.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

NOTES BY THE WAY.

[5439.] *Owner's Risk Rate.*—"At owner's risk and ordinary rate" is what I myself principally object to pay. Yet I must yield to this unjust imposition every week. The G.W. Railway will only accept "honey" on these terms, i.e., I have to pay full rate and take all the risk of breakage or damage. As regards the latter I do not complain, and should have no occasion to grumble if the railway company would accept a reduced rate, but to charge the highest rate and not accept any responsibility is, I consider, a hard, if not an unjust, act on their part. During the past quarter of a century I do not remember having made more than three claims, and in each case small ones, so that I am evidently paying now for the numerous claims that numbers of our craft have made on the various railway companies. I say this because our stationmaster at Newbury informs me that his company, conjointly with other railway companies, have decided not to undertake the carriage of honey except on the condition "that it is booked at ordinary rate, and at owner's risk." I ask: What can we bee-keepers do? We have the honey to sell, and our only means of transit to the customer is the railway; so we are tied hand and foot. I wish Mr. Belderson (5422, page 56) every success in his effort, and although the railway will take small parcels of one to two dozen lbs. of honey at half-rate per passenger train, I nearly always pay the full rate per "goods train," and I may add, without delay or damage; but when I happen to send it per passenger train I am always anxious till I get an acknowledgment to make sure it has arrived in good condition.

Thanks to our friend Mr. J. Herrod for correction on page 67. I have no doubt if

one is at hand to see to the dispatch of honey on the return journey it can be sent at half-rate, but although I have many times put in the box with my exhibits a "consignment note" (ready filled in except the signature of the person dispatching goods), I have never been able to get these said consignment notes used, and in talking the matter over with our stationmaster he told me the railway companies carried parcels of certain perishable and other goods at a cheap rate to encourage trade in the minor industries.

Referring to the query on "Weeping Sections" (3326, page 69), may I add to our Editor's reply by saying that honey of the finest quality, and with the thickest capping, would "weep" itself into an unsaleable condition if left in a dry shed during such a wet period as we have had since last July or August, when we should suppose it was removed from the hives. Comb-honey should always be stored in a dry, warm room; a closet or cupboard near a fire is the best place. I store mine at the back of twin-chimneys in an upstairs room having hollow walls, and often place a lamp in the room to drive out any damp air that may have accumulated during a wet period. By these means my honey is as good (that is, my best selected) in June as it was when taken from the hive the year before.

Monday, the 22nd, as I write, is a spring-like day, and the genial sunbeams have lured into bloom the rash firstlings of the crocus, and the busy, hustling bees are carrying in the first pellets of golden pollen. I have just been round the apiary, and most of the hives' entrances are black with bees, showing that the condition of the colonies are so far satisfactory. There are also a good few bees at the accustomed drinking places, either showing they have a retentive memory or that they are prompt in discovering a supply near at hand.—W. Woodley, Beedon, Newbury.

QUEEN REARING.

MR. J. RYMER'S METHOD.

[5440.] In reply to "J. H. W." (5402, page 33), who inquires with regard to the need for removing bees located only one-and-a-half miles from the heather. I should say, certainly not; it would not be worth the labour. I have seen my own bees fly over a full mile of beautiful heather bloom to higher ground, which no doubt suited them better, and I allow them to be the best judges on the question of distance.

Mr. Taylor's criticism (5431, page 63) no doubt may be correct; anyway I am glad to see it. Exchange of views generally does good. He may know a great deal more about queen-rearing than I do, and I respect his views accordingly. But I have already tried the method suggested, along with others, and did not make it a success. My plan is not intended as a method of raising queens for the market. It is for the bee-keeper desirous of supplying himself with queens of the best quality for home use, and so be independent of the professional queen-raiser. It is simple, devoid of technicalities, and certain in its action, and has provided me with queens that are in all respects satisfactory; in fact, the best I have ever had. I have merely described exactly what I do myself, and leave others to do the same. To be successful a reserve stock of nuclei must be always on hand for any emergency that may arise, and this is the greatest boon to the working man bee-keeper, because there are times when queens are unobtainable, and he can thus fill his own wants with practically no expense.

Now just let us examine this serious defect; or what is taken as the "weak point." I have never considered it as such, but quite the reverse. It may be a matter of opinion only. When I remove a nucleus on a fine day, and bees are flying freely, I am positively certain that I get a very large number of bees in the prepared hive that are not "field bees," as stated. What about the young bees that are taking their first flight on that day, and those that have done so for the preceding three or four days? I should not be surprised if our Editor should think I had secured a quantity of the very best bees for the purpose, and the "field workers" could go on with their work. As to the comb of eggs remaining in the hive four days, this I could not allow. I must have the queen fed with "royal jelly" from the first day of hatching. It may be said I should secure this, provided the larva was not more than three days old. I prefer a queen reared as such from the first day.

The results of the two systems is the most remarkable of all. Every queen I rear will fly to mate from the third to the fifth day after hatching (weather permitting), and I have rarely seen a queen flying after the sixth day. Last year, in the first week in September, I took the Rev. Mr. Lamb to see one of my young queens in one of those six-frame hives, supered with four "W.B.C." hanging frames, and the bees were working hard in the sections. This queen was hatched on July 2. Contrast this with six virgin Ligurian queens I had from my critic in 1902. The first one left the hive to mate on the eleventh day after receipt, and the last one on the 37th day after. Those facts speak for themselves. I am guided by the results I get, and nothing else.—J. Rymer, Levisham, February 20.

(*Correspondence continued on page* 76.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

We often hear about the danger of keeping bees too near dwelling-houses, and there is, of course, more or less of truth in the remark, but, judging by the apiary seen below our friend Mr. Linter has no such fear, and as no reference to trouble by the close proximity to his cottage is made in the "notes" sent, we assume it works out well. Beyond this we need add nothing to the useful information conveyed. He says:—

"I commenced bee-keeping some 25 years ago, and at the time, being in possession of a cottage with a nice garden, I was anxious to have something in it which would be interesting to one's mind, while I had no objection to its being profitable also. In this way I decided to keep bees. Acting on this resolve I bought a stock from an old bee-keeper near by, and though it was winter time, got the hive into my own garden. In the following spring I amused myself by watching the bees at work, and often wondered what they were doing inside the hive, but took no immediate steps to go further into the matter. In the following summer I had two swarms, one of which decamped and was lost. I next managed to put a window in a straw skep by cutting a square hole in the straw before hiving a swarm in the latter, but found that my window was of little use for showing the bees at work, so after keeping bees in skeps on the old plan for some years I chanced to hear of a bee-show to be held at Bournemouth, and there for the first time I saw a modern frame-hive, and being struck with the advantage of these hives I at once decided to try the new system and soon became delighted with it, one pleasure being the thought that I should not have to destroy my bees in the sulphur-pit to get the honey. In this way I began on the modern system, and for many years have found the bees profitable and interesting. Without venturing on many hives they bring me in from £5 to £7 of profit in a fairly good season, which is a great help to a cottager. I never keep more than 15 hives at one time. I have recommended bee-keeping to many others of my own class, and have travelled long distances to render help to beginners. In this way it has been my good fortune to save many a stock from the sulphur-pit.

MR. T. LINTER'S APIARY, WINTON, BOURNEMOUTH, HANTS.

"But, after many years of profit and pleasure, trouble came in the shape of foul brood. In watching one of my strong, supered stocks, I thought there seemed to be something wrong in the way the bees worked, and determined to remove the super and examine the combs, when, to my surprise, I found unmistakable signs of

foul brood in the hive. A bee-keeper friend to whom I showed it agreed with my opinion, and urged me to overhaul my other hives. This I did, and I found the disease had started in another stock, so I decided to burn the lot, including combs, frames, quilts, and honey, hoping in this way to stamp the disease out once for all. All spare combs I had by me were placed in empty hives. I then put a lot of sulphur in a saucer, set it alight, and thus fumigated the combs thoroughly. Shortly after this a friend gave me two driven lots of bees, which I united, and put in one of the hives from which the diseased bees and combs were taken, but although the hive had been disinfected I found in the following spring that foul brood had again commenced. Eventually my stocks dwindled down to three, so I determined to make another effort, and so commenced feeding with medicated syrup, and succeeded so well that I have now six strong, healthy stocks, and seem to be quite clear of the disease. The reason why I mention this is, it might encourage beginners to persevere after a first failure to cure.

"One summer I made another mistake by planting cabbage in front of the hives, and lost hundreds of bees by so doing. I found the bees going down between the cabbage leaves for water, and, on attempting to crawl up again, they kept slipping back, owing to the smooth, slippery surface. When endeavouring to get straight combs built I find it a good plan to place them near the dummy until built out. I have had no trouble with swarms for years. In fact I have not seen one. I have tried my hand at queen-rearing, but had no success in that line, seldom getting the bees to rear more than two or three at one time. But I find that queens must be renewed; it does not do to depend upon old ones. With regard to exhibiting at shows, in years gone by I have been very successful in securing first prize for comb-honey at local shows. I have been able to get attractive and good glass supers of honey by placing the super upside down in a basin of warm water to make the glass very warm. I next take a sheet of foundation—cut to proper size—and bend it round in circular form, pressing the two edges together. The tube-like sheet of foundation is then placed in the super, pressing the top edge against the warm glass till it is firmly fastened for the bees to commence work on. When neatly done in this way all the comb can be seen, and if filled quickly and well it stands a good chance of first prize. Anyway, I have always secured a first on staging a super filled in this way. In concluding, I wish to thank our Editors and contributors to our journals for the valuable help I have received."

CORRESPONDENCE.

(*Continued from page* 74.)

"HONEY WITHOUT BEES."

[5441.] I am now in a position to report further in this matter. Acting on the opinion of the B.B.K.A., and of individual bee-keepers, as expressed in your pages, I wrote first to the offending firm believing it as well to give them an opportunity to voluntarily withdraw their "Malt Honey" and "Honey without Bees" description. Here is their reply, omitting names and addresses:—

"Dear Sir,—Your communication of 5th inst. came duly to hand, and would have received earlier attention but for extreme pressure of business. The product, "Malt Honey," has been so called because of its constituent elements for some years, and the advertisement was inserted in ——— without any thought of doing injury to, or hurting the feelings of, any member or members of the Bee-keepers' Association. No thought was further from our mind.

"It seems to us, though, quite natural that to bee-keepers the description, "Honey without Bees," would appear to be prejudicial to their industry, and consequently we are willing to refrain from advertising the product in this way from henceforth.

"We may mention that your letter came to hand after we had given instructions for the advertisement to be repeated in the March issue of the magazine referred to, and too late to stop its insertion.

"Trusting that the above assurance will be satisfactory, we beg to remain, yours faithfully, ———".

The above reply was not received till eight days after I wrote the firm, and I had concluded that I should not get a reply; so that just the evening before it arrived I had written to the Inspector of Food and Drugs for the district where the firm carries on business. Here is his reply:—

"Dear Sir,—I am obliged to you for your letter of the 15th inst., addressed to the Inspector of Food and Drugs. I am having the matter looked into, and will probably communicate with you in due course. Yours faithfully, ———, Medical Officer of Health."

Immediately on receiving the reply from the company I wrote a second letter to the inspector saying that provided he was satisfied that the honey description would be withdrawn I should prefer that no steps be taken against the company in question. I also wrote to the company telling them what steps I had taken, and stating that I should be quite satisfied so long as the term "honey" was not used in any shape or form as a description of the product in

question. At the time of writing I have heard nothing further, but when I do will write to the BRITISH BEE JOURNAL again.

May I express the opinion that this was not a matter for an individual like myself to take up. Had the British Bee-keepers' Association taken the matter up on its own account it would be far more effective than coming from a private individual like myself. I am strongly of the opinion that it should be one of its duties to prevent competition of this kind, and to see that nothing is called honey that is not honey pure and simple. This was a clear case, if ever there was one, where its influence should have been exerted, and I hope that if nothing results from my efforts the matter will be taken up by the Association.—W. J. FARMER ("A British Bee"), Truro, February 17.

HONEY AT "OWNER'S RISK."

[5442.] Having had occasion to go thoroughly into this subject, I think I may safely say that in telling Mr. Woodley (vide page 52) that owner's risk rate does not apply to honey returned from show, the railway official withheld a few words the addition of which make all the difference. Had Mr. W. been told that "the owner's risk rate does not apply to honey returned from shows, unless you or your representative are able to fill in and sign a consignment note of the railway company who will return your honey to you from the show, and hand the signed note in with the honey for the return journey," a full statement of the facts as I find them would have been made. What adds to the difficulty of dealing with this matter is the fact that more often than otherwise the Company that undertakes the task of carrying the honey to and from a show is not the same Company that accepts it from the exhibition for return from the show. In this way, the honey usually has to pass over the systems of more than one Company, and, unless the exhibitor is able to hand his boxes over to the carrying Company himself at the close of the show, and fill in and sign the consignment note, it is next to impossible to get exhibits returned at owner's risk rate. Consequently, as Mr. Woodley says, the charges for the return journey are doubled. I do not know that we can expect even the most obliging of show secretaries to undertake to fill in and sign consignment notes for all exhibits to be returned at owner's risk, and, if he did, I fear he would get "more kicks than ha'pence," as the saying goes, for his pains. I am afraid your correspondent, "Ebor," (5433, page 66) would be unsuccessful in his claim against the Railway Company for his loss, because I believe the Great Eastern Railway Company's plan is the result of an understanding arrived at a year or more back, between the several Railway Companies—viz., that, owing to the fragile nature of comb-honey, they will only carry it at the owner's risk, i.e., whether the owner pays full parcel rate or half-rate, they refuse to be held responsible for damage to comb-honey, and only accept it for conveyance on these terms. For this state of things we have to thank careless honey-producers, some of whom have, to my knowledge, had consignments of comb-honey damaged through bad packing, and have then made a claim upon the Railway Company for the damage. I know only too well the trouble that the Railway Companies will take to resist a claim for damages. It usually takes them two months to sift a claim for half-a-crown.—W. LOVEDAY, Hatfield Heath, Harlow.

OWNER'S RISK RATES.

[5443.] It may be well perhaps for some one to corroborate what Mr. J. Herrod said in his letter on this subject last week (5434, page 67). I do not think that there is any ground for supposing that honey exhibits cannot be returned from shows at owner's risk rates. I take it that the regulations of the main railway companies are very much the same, and I have before me at this moment a notice issued by the London and North-Western Railway Company which gives the "reduced rates" for the conveyance of various products, bacon, cheese, eggs, honey, etc., by passenger train. According to this scale you can, for instance, send 24 lbs. of honey fifty miles for 6d., or 100 miles for 9d., or 200 miles for 1s. There is no restriction stated as to the point from which the consignment is despatched, or the purpose for which it is being sent, except in regard to certain articles—game, poultry, and rabbits. In the case of these the rates are not applicable between stations in England and stations in Scotland. How then can "owner's risk rates" be refused in the case of exhibits of honey which are being returned from shows? Collection is not included, so that a payment may sometimes have to be made on that account. As a matter of fact, I once obtained, unless memory plays me false, a refund of an overcharge made through the railway company's officials' omission to observe that the return label of an exhibit was marked: "Agricultural Produce Rate," or "Half Rate." The difference between the ordinary rate and the reduced rate was, I believe, repaid me without demur.

Several years ago I expressed my sur-

prise in your columns that more advantage of this reduced rate was not taken by exhibitors. Further experience in the capacity of steward seems to prove that exhibitors are for the most part either ignorant of the existence of this rate or indifferent to the cost of carriage; unless it be that the saving in rate is not considered to be equal to the risk taken. The greater number of exhibits which I have handled have been sent at the ordinary rate, and I think that it has sometimes happened that an exhibitor has forwarded his exhibit to the show at the reduced rate, but has failed to make the necessary notification on the return label, and in consequence the full rate has become payable. Stewards cannot be expected to correct the omissions of exhibitors in this respect. —E. CHARLEY, Hon. Sec. C.B.K.A., Ince, Chester.

BEES IN A CUBIC INCH?

[5444.] The writer of 5432 (page 64) sets me a problem I or any other man cannot solve. How may bees are in a cubic-inch of a clustering swarm? Being a man of "Practical Experience," can't he see that he has left out one of the factors on which the solution depends? I have seen a 4lb. swarm, after lying out the greater part of a day and cold night, in a downpour of rain, occupying so small a space that I would not have estimated its weight at anything like half that, while on many hot days a similar swarm has been estimated at fully 6lb., until the scales showed that it was only 4lb. In a cluster of 3,000 cubic inches the bees might count up to 20 for each inch, but under ordinary circumstances they would number only half that; still showing a respectable swarm of 30,000 bees, or about 6lb. weight. That is "practical experience." The riddle as propounded by my Bucks friend is all a matter of guess, depending on temperature and a few other points.—D. M. M., Banff.

A FEBRUARY EXAMINATION.

AMATEUR-MADE HIVES.

[5445.] Last week, when giving candy to those of my stocks requiring it, I took the opportunity of examining all my hives to see how they had fared during the recent somewhat inclement weather. The result I now send, hoping that it may be interesting to those of your readers who are a bit fond of "poking fun" at amateur's work.

I have now 16 hives in use, eight made by myself, the others purchased from various makers. The first-mentioned eight I found in excellent condition, and perfectly dry.

Four of the others having the wood roofs covered with thin sheet zinc were equally so, but the remaining four were thoroughly wet, one having all its quilts saturated through to the frames. The last-named hives vary in price from 21s. to 30s. each, and three of them bear the names of well-known makers. After promptly taking the necessary steps to remedy the evil I determined during the coming summer to clear out all such rubbish from my apiary.

May I be permitted to suggest to Mr. W. Loveday that the song he mentions is that of the thrush proper, not "missel-thrush," the latter having merely a low, crooning note sometimes mistaken for that of the blackbird.—C. H. TOMLINSON, Hollywood, February 19.

BEES AND HAZEL CATKINS.

[5446.] Referring to Mr. Woodley's "Notes by the Way" about bees and hazel catkins (page 52), I must say he forestalled me in being first to write about them owing to my last letter being so long. On Sunday, February 7, in an orchard where I noticed six colonies of bees, there were twenty large hazel trees and many small ones. Our party were examining the catkins on the hazels, and one of the onlookers remarked that bees gathered pollen from the catkins. I assured him that he was wrong, and that he would never see a bee get pollen from the hazel catkins. He asked how the blossom got fertilised. Now I think I am right in saying neither bees nor insects fertilise the blossom, but the wind does. A little later on, when the leaf begins to grow, if the branch is shaken you will see a cloud of pollen dust fall from the catkins, and this, in falling, fertilises the blossom.—J. SKINNER, Bristol, February 18.

PACKING SECTIONS FOR TRANSIT.

TROUBLE WITH RAILWAY COMPANIES.

[5447.] In reading the current issue of B.B.J. I note the trouble your correspondent "Ebor" (5433, page 66) has had with railway companies by rough usage and careless handling of packages of honey. I quite sympathise with him, having had similar treatment myself. But for the benefit of others who may have honey in sections to send by rail I will give the method I usually adopt.

First, tie up sections tightly in half-dozens, with a piece of cardboard, same size as sections at each end; then, having procured a box large enough and strong enough, I place about a couple of inches of hay or similar stuff at bottom, covering this with a sheet of paper, and on it stand my half-dozen parcels of sections, leaving room at sides and ends to press more hay (which I do with a lath), so as to keep them

from moving; then place another sheet of paper on top of sections, another layer of hay, and paper again over this; then more sections till box is nearly full, but leaving room for a good layer of hay on top, taking care to press it down tightly all around sections so as to make it next to impossible for them to move. This done, nail on lid. Simply write on label: "This side up," or "With care." Thus treated, I find the sections invariably travel safely, arriving in good condition.

It may appear strange, but it is a fact that when I have taken the extra precaution (as I used to) to label them boldly, "Honey in sections," etc., etc., they were very often badly damaged. I quite agree with "Ebor's" suggestion, and think with him that this little question of railway companies' liability ought to be settled, and would be pleased to contribute my mite to the fund.—W. A. Woods, Normandy, Guildford, February 20.

LEAKY ROOFS.

[5448.] One can readily understand the feelings of Mr. W. Loveday, and others, with regard to the spirit displayed by your correspondent, "W. H.," on page 43, re "Leaky Roofs." I would call his attention to a previous communication from "D. M. M." (5327, page 484, vol. xxxi.), and thence to (5353, page 506), and respectfully ask him to note the difference between his reply to "D. M. M.," and that of Mr. J. Gray. This was not simply a question of hive-covering, but the hive itself, and to his credit Mr. Gray immediately responded by offering the use of it. I am led to ask, did "W. H." send any "salt" with that letter, or must we find our own? For when he tells us that it was out of consideration for the correspondence column, we need it—the salt, I mean.

Be honest, "W. H." Did you give our Editors a chance of gratuitously publishing that real remedy with full particulars and drawings? I can hardly think so, as it is not a question of space when it comes to anything likely to be beneficial to the readers of the B.B.J., proof of which we have weekly.—E. Geo. Ive, Ollerton, Notts.

Queries and Replies.

[3328.] *Controlling Swarming.*—Would the following plan, or some slight modification of it, answer? 1. A stock of bees in a hive (say, Howard's "Paragon," or a similar one) swarms, and there is a super on in which the bees are working. I take an extra hive-body filled with frames in the usual way, and put the swarm into it, and place on the super with the bees in it. I then remove the original stock from the floor-board, putting the swarm, with super on, in its place. I now stand the original stock on the super, giving the bees in it a fresh entrance, say at the side instead of in front. The super will thus still be a super to the swarm, but a nadir to the old stock, and will, of course, have excluder zinc below it, and above too, if advisable. Would not all the flying bees from the stock join the swarm on their return home and add to its strength, and thus so weaken the stock that no second swarm would issue from the latter? 2. Could I not, in the autumn, remove the old queen, or, leaving the selection to the bees, reunite the two by simply taking away the super with the excluder zinc? I keep a few stocks in the country, just to supply the household with honey, and they have a tendency to increase to a greater extent than I require, but if the above would answer I should be able, without much manipulation, to keep them within reasonable bounds.—East Kent.

Reply.—1. Your "plan," being based on the idea of working with a hive of special construction (the "Paragon"), is one upon which we could only venture an opinion not supported by practical experience, as we have never used the hive in question. It will therefore be far more safe if we invite Mr. Howard to give his view on the question, and we will do this and ask for a reply to go in next week's issue. On the broad question of preventing the issue of second swarms, however, we may say the removal of the parent hive to a new location, and placing the swarm (with supers) on the old stand, would make the issue of a second swarm very unlikely. 2. The manipulation needed to prevent the issue of a second swarm on the orthodox plan would no doubt be less troublesome than the one you propose.

[3329.] *Reliquefying Granulated Honey.*—Would you be good enough to give me your opinion of enclosed honey? I have just sold 100lbs. of it, and have received severe complaint stating that it is not pure, etc. I may say that I have sold over 400lbs. of it to many customers, and have had no complaint, and in some cases have had repeat orders three or four times.

May I ask you in your valuable paper, the B.B.J., to give me some hints on extracting. I have not done any until this season. Where I have kept my honey, when the days are warm it is all right, but directly we get wet and cold it granulates. Is it absolutely necessary to keep it in a warm place, because if so it will require artificial heat.

Any information you can give me I shall be very glad, as I want to get the honey as perfect as possible. I send name and sign—PERFECTION, Hants, February 13.

REPLY.—Honey sent has, we fear, not been very carefully reliquefied after granulating, and needs more careful straining to remove the particles of wax. There is also a peculiarity in the flavour that we cannot account for. With regard to keeping honey in good condition, it should always be stored in a dry, warm place.

[3330.] *Specimen Bees of Various Races.*—Can you tell me where I can obtain set-out specimens of the following races of bees? I should require queen, drone, and worker of each. (1) Pure-bred Cyprians, (2) Carniolans, (3) Italians, (4) Apis florea, (5) Apis indica, (6) Apis dorsata.—L. B.-W., Bristol, February 22.

REPLY.—The most likely person to supply specimens as required in this country is Mr. F. W. L. Sladen, Ripple Court Apiary, near Dover.

[3331.] *Feeding Bees in February.*—I fed my four stocks of bees liberally with syrup throughout September, and also let them retain most of the honey they had gathered last season, but, as I am rather a novice in bee-keeping I am not quite sure whether they have enough food to carry them on to the spring. I am from home at present, and shall not return until the end of March, and, unfortunately, I cannot trust the person who assists me with the bees—sometimes alone—in the matter of feeding. 1. To make sure, therefore, had I not better get some candy and have a cake put under the coverings of each hive? 2. For an inexperienced person to do that successfully is it necessary to give a little smoke, or to use a carbolic cloth? I have not my "Guide Book" with me, and don't remember how late in the winter candy is given to bees, and when they should be begun to be fed with syrup. I made many mistakes last summer (my first season), and am anxious to do better this year, and will do so if patience and care can accomplish it. I have a spare hive above which I am going to set a skep of bees this spring. 3. Is it better to have it painted inside as well as outside?—FRENHINES, South Wales, February 19.

REPLY.—1. Yes, by all means do this 2. Candy may be given to bees at any time, if due care is exercised when disturbing quilts in cold weather, and using a little smoke when manipulating. 3. Don't paint insides of new hives; it is only advantageous to do so when using second-hand hives.

[3332.] *Moving Bees Thirty Yards in February.*—Would you advise me through the medium of your journal how and when to move my hives of bees a distance of about 30 yards in my garden? I have eight stocks in frame-hives to move, and have been waiting all the winter for hard weather to keep the bees in for a week or two, but we have in Devonshire never had more than one cold day at a time, and the bees are constantly flying. I might add that the proposed site for the hives is out of sight of where they are now, as a corner of the wall comes between. I am a subscriber to the Devon branch of the association, and I take the weekly B.B.J.—(Mrs.) G. H. L., Devon.

REPLY.—The rough sketch sent shows that the hives will have different surroundings in the new position, and if this is further marked by putting a small bough of a tree on each flight-board, to cause the bees to note the changed entrance, there will be little danger of loss of bee-life. After a few days flying the boughs may be removed.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

E. P., Anxious (Gravesend).—Home-made Hives.—The metal runner sent is quite right, and the only way in which we can account for your confusion is by supposing that you do not understand how to fix the runners to top edge of hive-body. The easiest way out of the difficulty would be to get a look at a made-up hive with metal runners, and all will be made clear in a moment.

ERIC BENNETT (Stockport).—Zinc for Hive Roofs.—If the zinc is painted white there will be no trouble from it "getting hot" when exposed to bright sunshine.

W. C. H. (South Devon).—The method of preventing swarming to which you refer is printed in booklet form, and was advertised in our prepaid column of February 18, and for some weeks past under the heading, "Never-Swarm System."

QUERIST (Lincs.).—Suspected Comb.—The sample comb sent is affected with foul brood of old standing.

*** *Several Letters and Queries are unavoidably held over till next week.*

Editorial, Notices, &c.

CAMBS. BEE-KEEPERS' ASSOCIATION

MEETING AT CAMBRIDGE.

The following communication reached us too late for insertion last week, and as the meeting takes place on Saturday next (two days hence), we give it the fullest publicity our columns afford :—

"SIRS,—Please allow me the privilege of stating through the columns of the B.B.J. that a meeting of bee-keepers, with the object of starting an Association of some vigour in the county of Cambridge, will be held at three o'clock p.m. in the C.E.Y.M.A. Room, St. Edward's Passage, Cambridge, on Saturday, March 5, when all bee-keepers desirous of taking part in the effort are cordially invited to attend.

"In the meantime, if those who will join in the work will send their names to one or other of the following it will greatly facilitate matters :—

"Kirk Allen, Cambridge ; G. E. Rogers, Wentworth Road, Cambridge ; C. J. Mapey, Cherry Hinton ; H. Seamark, Willington ; F. R. Ford, Burwell ; C. N. White, St. Neots. C. N. WHITE."

It is very gratifying to see that the interest taken in the effort referred to above is widespread and keen in the county, and we cordially wish the promoters of the meeting every success in their praiseworthy endeavour. That so good a bee-county as Cambs should be without an active B.K.A. is an anomaly that needs redressing, and if the right men come to the front and take part in the executive work there should be no doubt as to the result.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

A NOTABLE SCOTCH BEE-MASTER.

[5449.] Among the galaxy of eminent writers who made bees their special study, and gave us of the fruits of their labours in book-form in the closing half of the eighteenth century few better deserve the proud title of "Bee-Master" then so frequently claimed than the subject of my sketch. National predilections may perhaps serve to bias my views and tincture them with a partiality for this one pre-eminent Scotch writer on apiculture ; but of this I am certain, no one will deny James Bonnar a foremost place in the ranks of prominent bee-keepers of his time. He wrote a small treatise on the management of bees at an earlier date, which I have never seen, but his larger work, "A New Way for Speedily Increasing the Number of Bee Hives in Scotland," was extensively read, and helped largely in disseminating a knowledge of bee-keeping and a love of the bees, during the early years of the last century. Published in 1795 it seems to have been launched on the public notice under the most favourable auspices. Many of the leading men of the time gave him their countenance and support by subscribing for his book—several taking a number of copies. Ministers everywhere invested in it, and landed proprietors did good work in distributing copies of the work among their retainers and tenants, thus spreading a knowledge of the newer and better systems of apiculture just beginning to dawn on the bee-keeping world. It had the powerful support of the Highland and Agricultural Society ; then, as now, a power for good in everything connected with agriculture. The Society accepted the dedication of the book, in return for which the work and the author received its blessing. But their favour did not end in empty words, as was read in the history of the Society : "On January 2, 1795, a sum of £10 10s. was awarded to James Bonnar, Bee-Master, Edinburgh, to assist him in publishing his treatise on bees, which work was dedicated to the society." The list of subscribers numbers over 400, and a perusal of the names contained therein is very interesting.

Bonnar, who was a beeman from his boyhood, had a sincere love for bees. It was his pleasure and delight to study them attentively, from the time when in their early flights these industrious creatures began to fly about and dance and sing, rejoicing at the return of the genial spring. All through the flowery season of summer he watched them plying their indefatigable labours, and records that he had often witnessed with the keenest joy his industrious servants carrying on their work with so much simplicity, alacrity, and cheerfulness, and singing so sweetly, "insomuch that they are fit to make me join the concert and sing too." Then in autumn, unlike many of his time, his tender heart and love and admiration for their untiring industry made him deprecate the barbarous practice, then so prevalent, of destroying the diligent little workers over a "gulf of blue-sulphurous flame." The great end and aim of his life was to extend the pursuit of bee-keeping, so that it might become an aid to soothe

poverty's bitter lot, and help to add to the income of many a family, at least a moiety to sweeten the hardships and brighten the enjoyments of life. Believing that the culture of bees in Britain had never yet arrived at anything near a degree of perfection, he advocated better methods of bee-husbandry, and did his utmost to show that the industry could be made one not only of pleasure but profit; deserving the attention of the philosopher, the farmer, or the industrious peasant. As a branch of rural economy within the reach of the humblest cottager, he showed that the small degree of labour and attention required for their management, and that only for a short time each year, was compensated ten times over by the returns obtained, so that no other of our minor industries gave anything like an equal return to that of bee-keeping if properly managed. He therefore made a strong point of urging strenuously for a vast increase in the number of hives, and of those engaged in apiculture. The number of hives might, with the greatest advantage, he pleaded, be increased twenty-fold, or even fifty-fold. Counting 800 parishes and 1,000 hives in each, with the profits modestly reckoned at 30s. per hive, he showed what the industry might become. In his calculation of increasing, at something like a normal rate, he works out the interesting result, that one stock in ten years might become 2,560! (I note that a contemporaneous English writer jumps to 8,200 in fourteen years.)

In reading Bonnar's work it will be seen by his enlightened and advanced knowledge that he was a keen observer. He had very intelligent views regarding the queen, and was one of the earliest to mark that the bees, while carefully regarding her welfare, showed her no signs of sovereignty. He was positive she was the mother bee, and that she laid all the eggs in the hive. He noted that all the bees performed their respective duties without awaiting orders, and that, indeed, the diligent little worker was the presiding genius of the hive, directing the well-being of the community. He proved that they could raise a queen or worker-bee from the self-same egg, and shows that from his own observation this was placed beyond a doubt. To prove this he withdrew the old queen and patiently watched the consequent results of cell-formation, special feeding, and development of the nymph, until, on the twenty-fourth day, the queen became a mother. He then cut out all queen cells and found that after a time the bees built no more, but on his supplying them with a piece of comb containing eggs from another hive, they at once proceeded to construct new cells and reared a queen. This enabled him "to assert with the utmost confidence that workers can raise queens from an egg when the community needs one." Yet, although he reasons out a point admirably, he (like many more in his generation) was utterly nonplussed about the drone. He seems, indeed, to have been groping very near the light, and the truth had well-nigh dawned on him, but the result of all his cogitation was to make him declare again, with the utmost confidence, that the queen had no need of the drone's assistance in fecundating her. "I neither know of what use they are or what to call them." And this, although he knew that it was a good sign, and certain proof that there was a fertile queen when the workers killed the drones, and that in hives which had lost their queen the drones were retained. Strange that he and other writers of his time did not put two and two together.

He believed in giving bees a liberal supply of food, and was a strong advocate of feeding in spring and autumn, believing that even a superfluity would not be lost, but that any generosity shown them would be "repaid with usury." When fed in spring they would breed fast, while those with little provisions would breed slowly; and he noted, what some moderns fail to appreciate, that just at the opening of the honey flow was the time they required most care in order to ensure that there would be no danger of famishing when they were at their strongest, waiting the advent of favourable weather and the honey flow. He rejoiced with a true beeman's joy at the sight of the first laden bee of the season, and carefully diagnosed the strength of each colony, as he counted 20 to 120 laden bees enter each hive in a given time, and he reckoned on the greatest numbers revealing the strongest hives. He knew it was bee-bread or pollen they carried, and he characterises Thorley's idea that it was wax as "absurd." He proves he knew something of the subject, for he tells us wax was an excrescence, exudation, or production from the bodies of the bees, and that the food they took contributed to make this substance. He calculated that there were over 30,000 bees in a good hive, while all below this number should be made good by uniting, because the colony stands a better chance of doing good work with great numbers than with a few; so his rule was "unite, and don't kill a single bee." He states he was never afraid to unite when it served a good purpose. Those who have lately been "discovering" the value of strong stocks might make a note of this! He practised driving and artificial swarming, but of this latter, though he believed in "human art and ingenuity assisting them wherever possible," he was not a strong advocate, because he considered in most hands natural swarming was best and safest.

In regard to hives, although he seems to have worked a number of "colonies" (the time of the once famous Stewarton was not yet), and was at least conversant with collateral boxes, still his experience seemed to make him consider "straw hives" rather preferable to anything else, although he allowed single box-hives answered very well and had several advantages over straw ones. He did not highly approve of colonies, and made the prophetic statement that "they never yet, and I am persuaded never will, be extended into general use, although it is nearly two centuries since they were invented by John Gedde, Esq." Some hives then in use were placed three boxes, one above the other, while some used an equal number placed "collaterally." What would Nutt say to this? But, indeed, these hives were known more than one hundred years before he introduced them. Bonnar gives these only a qualified approval, saying: "I do not deny, but bees may thrive pretty well on this plan." It shows how old customs and practices die hard, when a prominent beeman, in the very closing days of the eighteenth century, could thus only bestow modified praise on all other hives, and declare that straw hives were still "rather preferable."

Let me close this appreciation of James Bonnar and his work by the following words of commendation by another able writer who knew him, and the words are doubly valuable coming from one who was so scant in his praise as Huish: "He has been a benefactor to his country, and implanted a desire in his countrymen to cultivate the bee, so that many are now ready to acknowledge with gratitude the advantage which they have derived from his counsel. I shall feel happy if the end of my labours be the same." The last sentence is re-echoed by—D. M. M., Banff.

REMEDIES AGAINST BACTERIA.

[5450.] The Press cutting I enclose may be of interest to your readers in connection with the use of remedies against bacteria. I cannot speak as an experienced bee-keeper, but my observation goes to prove that naphthaline has little value as a destroyer of wax-moth even. At the beginning of this winter two stocks of bees in modern hives, with the usual accessories, came into my possession from two persons who were for a while prevented from taking care of them. During the course of cleaning up the frames which had been in use I found embedded in almost every frame, in the grooves, one or more cocoons of wax-moth. I had previously noticed the unsatisfactory condition of the inner surfaces of all hives I have seen as issued by makers, being rough and unplaned. In this condition they offer shelter and breeding-ground for various small insects, moths and bacteria. It appears to me to be rather a scandal that a maker selling a hive at a price from 10s. to 20s. does not send it out with all surfaces clean-planed and free from niches and cracks. I should suggest the avoidance of all hives which are not clean-planed inside, also the disuse of grooved frames and sections. The plainer and cleaner the surfaces of everything connected with hives and bees the better it will be in all respects.

I observe that a correspondent, "H. B., Kent" (Query 3326, page 69), asks you concerning the use of bichloride of mercury as a disinfectant. I should strongly urge him to avoid the use of this substance. It is a most powerful and dangerous corrosive poison, and is difficult to eliminate, and if used to disinfect the hands is liable to cause a good deal of skin irritation. Further, if there be any abrasions of the skin, the trouble may be a dangerous one. I think he would find that a 5 per cent. solution, in water, of pure carbolic acid (absolute phenol) would be the most safe and effective disinfectant for all purposes, followed by plenty of soap and water—the latter alone being a most effective disinfectant if used hot.

In all books on bee-keeping which I have read there are many "don'ts," but very few "whys." In this connection, may I ask why beet-sugar, and sugars other than cane-sugar, should not be used for bee-food? Why, for instance, may not commercial glucose (usually a thick, clear, and colourless syrup) be so used? I send name, etc., for reference, and sign—FITZFABIUS, Cornwall, February 22.

[We do not usually print extracts without giving the name of the paper from which the cutting is taken as authority for the statement. While it is perfectly well known that naphthaline has "no action on the larvæ of destructive insects," it is equally well known that it is highly distasteful to those insects, and prevents them harbouring in its presence. Entomologists have for a very long time used it in insect cabinets, and know of its efficacy in preventing the destruction of their collections by mites, so common and which multiply so rapidly where this preventive is not used. Nor will those who have employed it liberally to keep moth out of cases of clothes or furs, especially in countries where clothes-moths are more troublesome than here, be persuaded that it is not to naphthaline that their preservation is due, especially where, at the same time, cases not so treated will be found full of these destructive insects.

With regard to your reference to books, we may say it is impossible, in books on bee-keeping, to always say "why" a thing

should not be done without unduly increasing the bulk of the book, and consequently the price. When matters have been thoroughly discussed, and certain conclusions arrived at years ago, it is not necessary to repeat the discussions in text-books. You will find "why" other than cane-sugar should not be used for bee-food thoroughly discussed in back volumes of the BEE JOURNAL. In short, the conclusion arrived at was that beet-sugar was injurious to winter bees upon owing to certain chemical substances which it contains. Glucose, besides its lower sweetening power, is not a perfect food, and cannot be converted into a perfect food, as cane-sugar can be. Trials years ago proved that bees could not be wintered upon this substance. For further particulars we would refer you to B.B.J. of December 5, 1901 (page 489), and many other numbers, in which the subject of cane-sugar, beet-sugar, and glucose has been dealt with in connection with bees and honey. We may also, without discourtesy, point out that beginners with bees are not the most qualified critics of text-books written by men of long practical experience of the subject. Moreover, without being told what is comprised in "all the books on bee-keeping" our correspondent has read, it is certain that if he chooses good books, and after reading fails to understand the "whys" of what is needed to make a successful bee-keeper, he falls short of less cultured and presumably more simple-minded men.—EDS.]

THE LATE CAPTAIN HETHERINGTON

[5451.] I was very sorry to hear of the death of Captain Hetherington, and much interested in reading your obituary notice of him in last week's B.J.

When visiting some of the prominent American bee-keepers in the autumn of 1901, I wrote to Captain Hetherington at his home, Cherry Valley, N.Y., asking if I might call on him, and after a few days I received a warm welcome from him, not to Cherry Valley, but to Strasburg, Virginia, where, over 300 miles from his home-apiary, he had established some large out-apiaries which he was just then putting into condition for wintering. Such an undertaking would only be equalled in this country by running a heather-apiary in Scotland in connection with a sainfoin apiary in the South of England, and I thought it a good example of the enterprise of one who, only a few years ago, was the most extensive bee-keeper in the world.

I was able to accept the late Captain Hetherington's kind invitation a little later on, and spent a very pleasant few days as his guest at Strasburg, Virginia. The railway line from Washington, D.C., where I had previously been staying, to Strasburg crosses the Blue Mountains. When I took the journey it was after dark, and I had a fine view of a forest fire in the mountains. At one of the stations in the Blue Mountains Captain Hetherington unexpectedly boarded the train and introduced himself to me. I at once recognised him from his portrait in the "A. B. C. of Bee Culture." He was a man of particularly fine physique. The hand with which he heartily grasped mine was hard, and indicated a life of hard work; at the same time he bore every mark of a refined and educated gentleman. He told me that he had got up at 4.30 that morning, walked four miles with a heavy satchel, done a day's bee work, and taken a long drive, also several long walks in the mountains. The active part that Captain Hetherington played on the side of the "North" in the American Civil War was mentioned in your article. The esteem he was held in by all with whom he came into contact may be gauged by the fact that the citizens of Strasburg were exceedingly friendly, and did everything they could to help him, his position there being not without the delicate points that some British bee-keepers who own apiaries in distant villages understand; but the delicateness of Captain Hetherington's position at Strasburg was increased by the rivalry between "North" and "South" that has not yet quite disappeared in some of the States.

Captain Hetherington gave me a woeful description of the ravages in New York State of the comparatively new bee-disease, "black-brood," and I gathered that it was partly on account of this disease that he had decided to open these apiaries in Virginia, where the disease is at present unknown. He seemed to think that the disease was very difficult to treat, but said he had found naphthaline balls to be of some value. The chief honey plant in this part of Virginia is Viper's-Bugloss *(Echium vulgare)*, a plant of the Borage tribe, that is common in old quarries and gravel-pits in England. In Virginia it is called "Blue Thistle," and is a troublesome weed.

Captain Hetherington was using his favourite Quinby frames in Virginia. As he was one of the most experienced and extensive producers of comb-honey, I was particularly interested in his super and sections. The super he preferred had metal T rests for the sections, a device well-known in England, but less used in America now than formerly. He used a two-bee-way tall section, the dimensions of which were 5in. high by $3\frac{7}{8}$ across. The sections were made in four pieces, each "dove-tailed" at the ends, the "dove-tails" being glued and fitted together in a special machine which did the work quickly and well. A rigidly rect-

angular section was thus produced, practically as quickly and cheaply as the ordinary one-piece sections, which Captain Hetherington objected to on the ground that they are liable to assume a rhombic shape. It may be here remarked that many experienced honey-producers in New York State and Ontario agree with Captain Hetherington in this matter, and it seems likely that the four-piece section will grow popular in the near future for another reason, namely, the scarcity and increasing cost of bass-wood, the only wood which is tough enough to make the folding V-joints of the one-piece section.

The thing that most took my fancy when staying with the late Captain Hetherington was his very neat and attractive folding carton for his tall sections. It was made of thin straw-coloured cardboard, with a small oval opening in front which was covered with a window of mica attached on the inside. He had a description of the honey, with his name and address printed in black above and below the window, and on the back was a high-class but wittily-worded advertisement with, I think, a sketch of a bear at a bee-hive, and the warning, "Please handle with great care." These cartons were quite the nicest-looking packages for honey that I have seen, the straw-coloured card and oval window being much more in keeping with the honey, and showing it off far better than the brilliant red and blue cardboard cases one sometimes sees with little round windows, or none at all. I must say, too, that some of the pleasing effects were due to the tall shape. Captain Hetherington said that these cases cost him only 65 to 78 cents (2s. 8½d. to 3s. 3d.) per 100, and he attributed much of his success in marketing honey to them.—F. W. L. Sladen, February 27.

DISTANCE BEES TRAVEL FOR FOOD.

[5452.] I am led by the remarks of our friend, "D. M. M." (5429, page 61), and his interesting criticisms of Mr. Doolittle's opinion upon this point, to venture a suggestion in the matter.

I think that it will be agreed that "D. M. M.'s" conclusions are at least thoroughly sound and reliable from a practical point of view, and that, whether bees are able to fly five miles or fifteen, they cannot store surplus if they have to range too far afield for this purpose. So much, however, must be allowed for locality—I have almost ceased to dogmatise since realising the full truth of this—that I find myself able to accept as possible even the "tall" statement that bees will fly so far as seven or eight miles from home to reach good bee-forage.

Mr. Doolittle is so reliable an observer, and so deservedly respected an authority, and so unlikely to reiterate a statement of this kind without being, himself at least, convinced of the truth of his data, that one is loth to label as "impossible" any one of his statements, and it is likely that the solution may be found in this very difference of locality.

I have understood that the apiary at Borodino is situate in a valley heavily wooded with the basswood (or lime-trees), from which the surplus comes. The flow commences at the foot of the hills, and recedes slowly to the highest trees, which are some miles away. Now this is quite a different case from the one in which a flow of, say, heather occurs without a warning, or any connecting link, and it appears probable that the bees are enticed, as it were, daily farther and farther afield until it is possible that they may reach the distance indicated. Lest I be misunderstood, I would say that I am not altogether disagreeing with my friend "D. M. M.," whose argument I respect, nor fully supporting Mr. Doolittle, as I, too, should be glad to know the latter's reasons for his assertion that bees travel up to six miles from choice, which is the main point at issue. Incidentally, it would be interesting to know how it was possible for him to thoroughly ascertain that all flow had ceased within the circle indicated.

It must be, of course, apparent that the area to be foraged increases the more rapidly the farther from home, and that where many colonies are located the home supply must soon be exhausted. Now, as it is almost undoubtedly this fact which has developed the inclination to fly at least some distance from home, even in a natural state, where but few bees, or one colony only, is located, it is possible that this unstated distance may be increased by stress of circumstance where, say, a hundred strong colonies are artificially collected.

It is perhaps possible, to put it plainly, that the habit may be formed (? by traditional accretion) until past necessity may appear as present choice. For myself, however, I do not believe that a flower grown between the hives is allowed to waste its sweetness on the desert(ed) air.

It is also certainly possible that there may be differences between the Banff and Borodino bees, as I believe that they are members of different races. I am quite open to correction upon this point.

Mr. Doolittle is well able to take care of himself, but I cannot avoid the above suggestion that knowledge of the flow is the important factor, in view of the emphatic statement of opinion by "D. M. M." that bees would (? invariably) die of starvation rather than travel more than five miles for food.—L. S. Crawshaw, Ilkley-in-Wharfedale, February 27.

SHOWS AND SHOWING.

[5453.] This subject seems to have run its course in your pages, with the result of showing that those who are best qualified to judge are anxious that a state of things that is becoming intolerable shall be ended. But I ask: Will Mr. Weston's proposed plan of buying up first-prize exhibits check dishonest exhibiting? In giving his views upon this subject on page 523, Mr. Weston asks has anyone a better plan to offer than his own? Well, I have thought out another plan, but as it would be expensive to carry out I will not discuss it. Neither Mr. Weston's plan nor my own, however, can do much to stop dishonest exhibiting as now carried on. Unlike the schedule issued by our exhibition committee, dishonest exhibitors have moved with the times, and fraudulent showing as we knew it ten years ago is quite out of date

The opinion expressed by Mr. Weston, that there is "no saleable quantity of honey behind the high-class samples exhibited at our shows," is quite wrong so far as many of our best bee-keepers are concerned. The honest, painstaking exhibitor is necessarily a person who is habitually thorough in all he does. His work cannot begin and end at the exhibition table, and the thoroughness displayed on the show-bench will be traceable in the bulk of his produce. One cannot be an honest and successful exhibitor and a careless and slovenly bee-keeper at the same time. In saying this I am not forgetting that honey of the best quality cannot possibly be produced in some districts. Therefore, whatever alterations in the arrangement of our shows may be decided upon, we can only expect always that the exhibitor will prepare and stage his finest produce and show it in the best possible condition. Evidence is not wanting that the public would take no interest in viewing produce of poor or even of average quality if not shown to the best advantage.

My notes carry me back to the show-tables of fifteen years ago, and then, as now, I find exhibitors who have been generally unsuccessful, while we have always had among us those who will not take the trouble to find the cause of their failure out, or make any effort to learn how to show really good honey to advantage. In the earlier days it was more common than now to comment upon individual exhibits in reports of shows. It was quite a usual thing to read something like this:—"Mr. ——'s exhibit was of high general quality, but badly shown." A comment of this kind would be very applicable to some exhibits staged in these later days. My experience is not so much that some bee-keepers fail to produce good honey, as that they are unwilling to profit by their failure and try to learn how to succeed.

Mr. Weston, in his later views upon this subject (January 7, page 3), refers to my complaint against the local committee of the Essex Agricultural Society, and suggests that possibly the committee of the Agricultural Society are weary of seeing the prize money constantly divided among about half-a-dozen bee-keepers. As to this I may point out at agricultural shows the bulk of the prizes are mainly taken by the same exhibitors. But apart from this I could, if space allowed, show that the smallness of the grant made to our County Bee-keepers' Association last year for the honey section of the show was attributable to other reasons than Mr. Weston suggests. On page 3 Mr. Weston writes of bringing back our honey shows to a condition which I am sorry to say has never existed, except on paper. Since I first became interested in bees and honey shows the bulk of the prizes have been taken by the most painstaking half-dozen or so men in the county, while there has always been some such as I have already described as unwilling to learn.

The committees of our Bee-keepers' Associations have never succeeded in creating the true spirit of friendly rivalry so desirable in all associated efforts. Some hold the opinion that the work for which the association was formed has now been accomplished. But it is quite certain that our County Bee-keepers' Associations may be usefully employed for many years to come in teaching what is best in bee-keeping. Honey is still regarded as a luxury in the home of the agricultural labourer, as it was five-and-twenty years ago, and we still import many tons of foreign honey of poor quality. The agricultural labourers are mostly ignorant of how to keep bees profitably, to gather Nature's wasting sweets, and provide a wholesome and comparatively inexpensive addition to his very limited bill of fare.—W. Loveday, Hatfield Heath, Harlow.

BEE NOTES ON VARIOUS TOPICS.

[5454.] *Close-ended Frames.*—Judged by the rarity of the mention of close-ended frames in your pages, it would seem that a close-ended brood-frame is a negligible factor in British bee-keeping, but in view of the strong position held by these frames in American apiaries it might be interesting, and may be useful, to have some light thrown on the subject. Perhaps those who have worked such frames in this country would let us have the benefit of their experience.

Mr. Alex. Reid, who writes in B.B.J. of January 14 last (5384, page 12) has all his stocks on close-ended frames, and claims several advantages over the ordinary variety, the most obvious, perhaps, being

the better retention of heat when "building up" in spring. Mr. Reid has, of course, his own opinion as to what constitutes an up-to-date and easily manipulated hive, and in putting his ideas into practice seems to have borrowed from no one. When in the unfinished state the above hive was examined, and duly commented upon by your correspondent "D. M. M."

Thereupon appeared a communication from a Derbyshire expert to the effect that he also had an improved hive, the benefits of which he was anxious to share with bee-keepers in general. But notwithstanding repeated requests the necessary information has not yet appeared, and beedom is still pining for that paragon hive.

The first-mentioned hive is now finished, and Mr. Reid hopes shortly to have an opportunity of submitting it to the verdict of his fellow beemen.

As Others See Us.—It is a rather dubious compliment the non-technical Press pay us bee-keepers in ranking our craft along with the sea-serpent and other mysteries, always on hand, ready to be worked up into spicy tit-bits for the delectation of newspaper readers. Needless to say, the choicest narratives of this type come from "across the pond." In this country a short honey-crop means a long sugar-bill, but the enterprising Yankee has found out how to get the necessary sugar without parting with the equivalent cash. In brief, the scheme is to move the hives to the neighbourhood of a sugar refinery, and bid the bees help themselves. To be up-to-date, a motor-car is used for conveying the winged filibusters to the scene of action.

Queen-mating.—In bee-books and papers quite a lot of space is devoted to the subject of queen-rearing, and although to a lesser extent on the raising of choice drones to mate with them. This is all right so far as it goes, but when it is considered that the odds are strongly in favour of the selected queens mating with the rag-tag and bob-tail of the surrounding apiaries, drones, although physically "fit" are unlikely to transmit any traits other than undesirable ones; while this remains the case it must be admitted that there is room for improvement. Some time ago there was shown, at a meeting of the B.B.K.A. in London, an apparatus designed for the purpose of facilitating the mating process, but the inventor could claim only a small percentage of successes. At the time the invention was viewed in a somewhat dubious light, and as no more has since been heard of the matter it is to be feared that mechanical mating has not proved a success. Somewhat more promising, however, is the method, initially successful, now being tried in America. The main principle is that of an enclosure, in connection with the hives, in which the queen and drones are allowed a free upward flight of sufficient extent to ensure satisfactory results. The hives used are ranged in a circle round the tent, and two entrances are used, the front one permitting the workers alone to pass, while at the proper time the back entrances are opened to allow the queen and drones into the enclosure. Perhaps some of our queen-rearing specialists might let us have their opinion on the mating-tent idea?—J. M. E., Ussie Valley, N.B., February 23.

OWNER'S RISK RATES.

[5455.] Previous to the show season of 1903 I, along with others of your readers, had to pay full rates for exhibits returned from the shows, but early last year I travelled to our nearest station (six miles away) and saw the station-master about the question of rates, and he advised me to sign an "owner's risk" note, which I did, and although I exhibited at most of the big shows, both in England and Scotland, I never had any extra charges to pay. I think this subject has more to do with the scarcity of entries than anything else, and that if the B.B.K.A. would take the matter in hand, and make it clear that honey can be returned at the lower rate, it would do more to swell the entries than by buying in first-prize exhibits. In my own case, prior to last year a dozen pounds of honey sent to the Agricultural Hall would cost me 2s. 2d. each way, which with 2s. 6d. entry fee made up 6s. 10d for a single exhibit, and as the majority of bee-keepers are working men like myself, we have to consider the expense. Now, however, I can send two exhibits at the cost of one. I have enclosed copy of a G.N.R. consignment note which explains itself.

I had an idea that the railway companies would not be so careful under the "owner's risk rate" as if at their risk, but although I exhibited so frequently I never had less breakages than last year.

In reference to Mr. Loveday's remark on page 77, I do not require to sign a consignment note for return journey.—W. PATCHETT, Cabourne, Lincs, February 29.

MAKING THE "W.B.C." HIVE.

[5456.] I notice in to-day's B.B.J. your reply (on page 80) to "E. P., Anxious (Gravesend)" re metal runners for "W.B.C." hive he is making. His error, I believe, is that he is using the flat side of the tin nailed on to the top edge of the back and front boards of brood-box instead of the edge, and the strips nailed on to the inside of the back and front boards. His first query (3317), February 11, implies such, for he inquires about the

space between top-bars and bottom of shallow-frame box "where the bees can get out."

If he had carried out instructions he would have seen that the tin angle-pieces forming he "metal runners" were nailed on to raise the frames up flush with top of brood-box.

I have just made a hive myself, and found no difficulty in following instructions in "Note-Book."

Apologising for my somewhat lengthened communication, but having received large help from your journal, I could not but try to render help where I felt capable.—W. LAINCHBURY, Northants, February 26.

[Your view of our friend's error is exactly our own, but there were other things which made it advisable that he should see a hive made up, as he evidently had never examined a finished frame-hive.—EDS.]

HOME-MADE EXTRACTORS.

[5457.] Referring to the subject of home-made hives (5426, page 57), one finds a certain amount of pleasure in reading communications from such generous correspondents as Mr. S. Darlington, and I take it he is only waiting for someone to say they would like to have particulars of how to make an extractor large enough to take four Standard frames, and he is ready to supply us with the necessary information.

I should like, with your permission, to suggest to Mr. Darlington that the present time would no doubt be found suitable by most readers for perusing the promised particulars, so that they might have an opportunity of making an extractor for themselves before the busy season demands their spare time in a different direction. It might also console Mr. Darlington to know that I have just finished making four "home-made 'uns" this winter, which are quite ready for either rain or fun to be poked at them. I would also add that I have bought several hives which have given the greatest satisfaction, and they were cheap ones, but then I got them from a reliable dealer.—E. GEO. IVE, Notts, February 29.

"MUSINGS ON PAST NOTES."

SELLING COMB-HONEY IN SECTIONS.

[5,458.] I am obliged to Mr. Kibble who, in his "Notes from Wychwood Forest," February 11 (page 58), makes an appeal on behalf of the bee-keepers in this district. Our best flow is from sainfoin and white clover, finishing up with limes and blackberries, so we have some of the best sources of honey that can be as regards quality. Yet I saw last year good sections (from sainfoin and white clover) 16oz. to 18oz. each in weight being hawked from door to door at fourpence each by a man employed by a bee-keeper located in the Wychwood Forest district. He had about eighty sections to dispose of, for which, to my knowledge, he was offered 5s. per doz., and refused the offer. Yet they were afterwards sold at the price named above. What was the result? He was soon cleared out; then others were applied to, but when a fair price was asked you had the fourpence each price of our friend mentioned above quoted to you. Now comes the question, whose fault is it that such low prices prevail? I say the fault, in many cases, is that of bee-keepers themselves. They sell at prices that cannot pay them, and once get prices down it is a big task to get them up again. I would we had more bee-keepers of Mr. Kibble's stamp in this district, then we should have no cutting of prices, and I hope his appeal will have its reward.

Owner's Risk Rates.—I think Mr. W. Woodley will find that he can have his exhibits returned at the "cheap rate" from shows. For his benefit I will relate what happened to me in that way last year. I sent a dozen jars of extracted honey to the "Grocers' Exhibition" at owner's risk rate, which cost me 11d. They would not accept honey by any other rate. I foolishly omitted to put on the return label, "Honey, cheap rate," and in consequence I was charged 2s for return carriage of same, which charge I refused to pay. On my explaining the matter to the station-master he asked how was the railway folk at the other end to know that it was honey, where the 2s. charge was put on? But I am glad to say I was let off by paying the 11d., and I consider it was more my fault than theirs in not putting it on the label for return.

Shows and Showing.—I think the contribution by Mr. Ernest Hart, February 18, put the above in a nutshell. We have the two boys wanting the apples; we have some bee-keepers wanting the prizes. To those I say, be like Resolute, go in and win. If beaten, try again. Find out where your weak points were; improve them for the next attempt; study the "winning exhibit," it is the best education one can have. Compare the colour, flavour, etc., with your own; see if yours is strained as nicely as the winning lot, and by doing so you will soon find out your defects. I do not believe by debarring, or buying, exhibits of some of the best exhibitors will solve the difficulty, as others will come to the front and then we shall have the same growl again. I should like to see a class for any that had not won a prize at the four leading shows, "Royal," "Confectioners'," "Grocers'," and "Dairy," which would help us out of the difficulty a bit. But there is always one

point we should not lose sight of, the exhibitors make the show.—C. T. EDEN, Chadlington.

*** *The crowded condition of our Correspondence columns this week compels us to hold over the usual Bee-garden picture and several letters.*

Obituary.

MR. EDWIN BALL.

We regret to receive a notification of the death of Mr. Edwin Ball, at his residence, Northampton, on Friday last, the 26th ult., in his 70th year. Mr. Ball was for many years secretary of the Leicestershire B.K.A., and took a leading part in promoting the meetings and honey shows of the association while resident in the county. On leaving Leicestershire for Northampton he joined the B.K.A. of the latter county, and was at one time lecturer on bees and bee-keeping under the auspices of the County Council. A great lover of bees, and a worker in the cause, Mr. Ball will be much regretted by his many bee-friends in the Midlands, who will join us in tendering our respectful sympathy with those he has left behind to mourn his loss.

Echoes from the Hives.

Maldon, Essex, February 20.—The weather has been quite spring-like for the last two days, with bees flying in thousands. Their musical hum seems to urge us to have everything ready for them, as the time is near when they will want our help, if we expect them to give us a good return of surplus honey.

While feeding my poultry to-day I caught the enclosed queen wasps. Are they the first you have seen this season? Trusting both our Editors are enjoying the best of health in this trying weather, and hoping all bee-men are in good spirits with regard to the season before us is the wish of—A.C.T.

Queries and Replies.

[3333.] *Managing Hives Located a Long Distance Away.*—I should be much obliged if you would give me advice on the following in your journal. At my home in Hants are kept three frame-hives and several skeps of bees, with no one to look after them properly. I therefore ask: 1. Would it be possible for me to work them satisfactorily from London, paying periodical visits every three or four weeks, and perhaps more frequently in the honey season? My idea is to transfer all the bees into frame-hives and endeavour to prevent swarming by giving plenty of room in advance of requirements, and using two or three tiers of sections as the honey season comes on. Is this feasible and likely to prove satisfactory? 2. Another idea is to take an allotment in this vicinity (Blackheath) and bring the bees here. A local bee-keeper, however, thinks this would not be satisfactory, being too near London. What is your view? Can you recommend a suitable hive for my purpose; not too expensive?—A. S. M., Blackheath, S.E.

REPLY.—1. Unless there was some bee-keeper near at hand who would be available if the need arose it could hardly be possible to manage so many hives satisfactorily by visiting them as seldom as stated. It may be said that the whole honey-gathering time would not exceed six to eight weeks, and during that season surplus-chambers and possible swarms would need attention once at least in every eight or ten days. On the other hand, if a local man could be secured for emergencies all might go on fairly well. There are many good bee-men in Hants whose services might be secured. 2. We could hold out no hopes of making bees a success in the neighbourhood of Blackheath. The bee-forage there is all too scanty to give a chance of surplus storing in any satisfactory quantity.

[3334.] *Bees Transferring Themselves.*—I have now made two "W.B.C." hives from the description given in the "Practical Note-book." I have also got a skep of bees (an early swarm last year, which have wintered well so far), and secured another stock in skep which is still on its old stand 17 miles away, and I shall fetch it home when needed. In the "Guide Book" there are some instructions about transferring bees, and after reading the details I have decided to place both my skeps over brood boxes and let the bees transfer themselves. To make this possible I have made an extra "lift" for each hive, in order to give room for the skeps. I have wired the frames, and fixed full sheets of foundation in them. If you will please answer the following questions I shall be obliged: (1) When should I fetch the distant skep hive home, and when will be the most suitable time to put the skeps over brood-boxes? (2 How am I to know when the queen has left the skep and is working in brood-chamber below, so that I can either remove the skep or slide a piece of excluder zinc between? I should prefer to take skep off altogether as soon as it can be done with advantage. Thanking you in anticipation. I am a constant

reader of the B.B.J. and B.K.R., and am gaining some very valuable hints in reading and re-reading the same.—F. H. H., Leicester, February 20.

REPLY.—1. Put the new hive (minus its brood-chamber) on the stand it is to occupy; then get the skep home and place it within the outer case of the frame-hive, allowing the bees to work through the ordinary entrance to latter. When bees are strong enough to nearly fill the skep, place the brood-chamber, prepared beforehand, in position, and set on the skep, as directed in "Guide Book." 2. By raising a corner of the packing surrounding the skep you can judge if bees are in full possession of brood-chamber below, and it will then be a question of waiting till all brood has hatched out in the skep before removal.

[3335.] *Utilising Frames of Food in Transferring Bees.*—I would be glad of your advice on the following:—1. Having lost all my bees during this winter, I have about a dozen frames of food left on hand. I intend buying a skep of bees to put on top of the frames and let the bees work down into hive below. Would it be advisable to put skep on top of the whole lot of frames, or would you advise using only one or two and filling body-box up with sheets of foundation? 2. Will a stock build up any quicker if put on drawn-out combs than with full sheets of foundation? I send name, etc., and sign—NOVICE, Yorks., February 25.

REPLY.—1. We should use four built-out combs alternated with four sheets of foundation in centre portion of body box, and when bees are well at work and breeding in frame-hive add foundation as soon as required for breeding. 2. If hive is very strong in bees early in May they will build up more rapidly from foundation, but the built-out combs of course save trouble at the outset, because the hive may have its full complement of frames when starting transferring operations in spring.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

BEEIST (Dumfriesshire).—Checking Foulbrood in the Honey Season.—Beyond the use of antiseptics or preventives—the most useful of which at the time stated is naphthaline—there are no means we know of by which foul-brood can be checked during the active season of bee-work. Injecting either phenol or carbolic acid will do no good whatever. On the other hand—and referring to our rather copious reply on page 68 being considered inadequate—we can only say that anyone who has "studied 'Cheshire,' Cowan's 'Guide Book,' and other modern works on bee-keeping" should, with ordinary intelligence, be so fully posted up in the subject that we despair of being able to add anything to his knowledge of foul-brood, or the best methods of dealing with it in all seasons.

CONSTANTINE (York).—Pink Honey.—There are no flowers the nectar of which produces honey of pink colour. If you could send us a small sample of the honey (?) referred to we might be able to solve the mystery of its pink—almost red—appearance. It may be helpful if you can refer to B.B.J. of September 14, 1899, where appears some information regarding "Bees and Jam Factories."

J. S. C. (Leicester).—Recipes for Medicating Bee-food.—Particulars and proportions of chemicals used in preparing bee-food, and for disinfecting hives, etc., will be found in the "Guide Book," pages 164 to 168. Salicylic acid and borax is now rarely used for the purpose, having been superseded by other and more useful remedies. Soluble phenyle is made only by Morris, Little, and Son, Doncaster. One ounce of the naphthol beta sent out from this office is sufficient to medicate 145lb. of sugar.

PERFECTION (Hants). — Reliquefying Honey.—The reply on page 79 conveyed all the information it is in our power to afford from the material supplied. The honey needed straining through fine muslin to remove wax particles, and there was a peculiarity in the flavour that probably justified the complaints made regarding quality, but how to account for the "peculiarity" no one is so well qualified as the person who reliquefied the honey. Anyway, we are sorry, but cannot tell how it arose.

F. J. (Mountmellick).—Spacing Frames in Spring: Painting Hives.—1. Frames that have been spaced $1\frac{3}{4}$ inches apart for winter should now be closed up to normal distance. 2. Painting hives of different colours when spaced 6 feet apart is hardly necessary except for those who raise queens in good numbers, and fear trouble during mating time. 3. The 16th edition of "Guide Book" will serve present purposes very well, though the 18th edition is brought fully up-to-date.

H. H. HALL (Hants).—Subscribers direct to this office receive the B.B.J. on Thursday morning, and RECORD in first week of the month.

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

SPECIAL NOTICE.

The Council of the British Bee-keepers' Association desire to call the special attention of the members and affiliated societies to the annual general meeting, which has been fixed for Thursday, March 17, when it is hoped there may be a good representative attendance.

Nominations of gentlemen to serve on the Council, notices of motions on matters it is wished to bring up for discussion, or topics of interest to be dealt with at the "Conversazione," which will follow the general meeting, will be welcomed, and should be addressed to the Secretary, 12, Hanover-square, London, W.

Apart from the official announcement made above, we add an editorial line to say how important it is that the meeting of next week should be a full and representative one. It will be familiar to our readers that the Council of the B.B.K.A. have been subjected to some rather severe criticism of late, and it is surely not too much to hope that those whose interest has been aroused thereby will make an effort to attend the meeting on the 17th inst. The invitation extended is a thoroughly cordial one, and, without any authorisation, we can safely say that nothing would be more satisfactory to the present Council than to see a full and representative gathering of the whole body of bee-keepers who are members of the affiliated county associations present and prepared to express their opinions freely and unreservedly.

There is not the smallest desire on the part of the Council to keep the entire management of the parent association in the hands of any particular set of men. The infusion of new blood would be welcomed, and if members can only be induced to take the trouble to inform themselves with regard to the privileges and duties of membership it will be plain that the election of the Council is in their own hands. As already said, no one wants to see the same names repeated year after year, and it is, to say the least, unreasonable that the few who consent to serve, and do the work ungrudgingly, without sparing either time or purse, should be regarded by some few as mere office-seekers.

The desire of all is to secure the best men that can be got, but names only are of no value whatever. Workers are wanted who will make a point of attending meetings, for there is more than enough to do in carrying out the work and objects of the Association properly. Not only so, but never before was there such full need for judicious care and forethought in steering a perfectly straight course as now. The work of technical instruction in agriculture (which includes apiculture) is developing continuously, and the placing of such work is more completely in the hands of county councils than before. Not only is this so, but the funds available for assisting bee-keeping will no doubt be increased if it can be shown that a commensurate amount of good is done. In this way it becomes more than ever necessary that grants in aid of bee-culture from the public funds should be judiciously allocated, and that only properly qualified men are employed in the work of teaching.

Finally, we say, if any alteration in the rules of the central association is required in order to bring them up to present-day needs, by all means let them be amended; but if a full measure of success is to be secured our county associations should loyally co-operate with the parent body by rendering practical assistance in the work. In plain words, does it not, to say the least, border on selfishness if county associations confine their whole efforts to extending their own membership, and in some cases almost grudge the trifling affiliation asked for to help on the cause of bee-keeping in the whole kingdom?

QUEEN-REARING IN ENGLAND.

By F. W. L. Sladen, F.E.S.

(Illustrated by the Author.)

PREFACE.

In the following account of present-day queen-rearing, nearly all the methods mentioned have been tested by me, and those that have been found most satisfactory are described in full.

Bee-keepers who are unable to devote the time and attention to queen-rearing that it needs will find a good and simple method of obtaining a few queens described under the heading of "Queens for every Bee-keeper."

My thanks are due to Mr. T. W. Cowan for having kindly read and corrected the MSS.

F. W. L. Sladen.

Ripple Court Apiary, near Dover,
Feb. 16, 1904.

INTRODUCTION.

During the last 30 years a highly-important and interesting branch of bee-keeping—the rearing of queen-bees—has developed. The queen being the mother of all the bees in the hive, a supply of young queens is of great value to the bee-keeper, for by means of them he can rapidly increase the populations of his hives and their yield of honey. The queen-breeder has also a more important work, and that is the improvement of the bee. Different races and strains of bees have been bred and crossed, and efforts have

been made to apply to bees the principles of breeding by selection, by which our domestic animals and cultivated plants have been rendered more profitable or beautiful. Considering the comparatively short period over which the work has been carried on, together with the peculiar difficulty of our being unable to select the male element in every case, these efforts have been remarkably successful. Honey-gathering, and other properties that go to make bees profitable, have been improved; and, in America, a beautiful strain of very yellow bees has been produced. Quite lately such important bee-keeping problems as the prevention of swarming, and of foul-brood disease, and the obtaining of honey from the red clover and other honey plants that bees do not now regularly visit because the flower tubes are too long for their tongues, have been attacked by queen-breeders; and, a commencement having been made in these important directions, some improvement is sure to follow, the extent of which it is difficult to estimate at this early date.

Plans for cheapening the production of fertile queens on a large scale are much used in the United States. Many of these plans are valuable; but some are apt to yield inferior queens, especially in the hands of beginners, and others cannot be satisfactorily employed in this country owing to the climate. It is not difficult to rear fine queens all the summer; but it costs a good deal more in bees and time to get them fertilised, and the season during which this can be done is shorter in England than in the United States. Queens reared and fertilised in England are, however, superior, for British bee-keepers at least, to those reared in warmer countries, although an admixture of foreign blood is often valuable. This matter will be dealt with under the heading of "Best Kinds of Bees."

QUEENS FOR EVERY BEE-KEEPER.

How to Save Naturally Reared Queens.—A supply of young queens of good strain is of great value to every bee-keeper, especially for replacing dead or unsatisfactory queens without delay. As a rule, queens reared under the swarming impulse are very good, and bee-keepers who require only a few cannot do better than save such queens from their best stocks.

The queen-cells should be cut out of the combs and distributed to queenless colonies or nuclei—preferably to those from which a fertile queen has been removed one or two days previously—as soon as they are "ripe," i.e., when the young queens are due to emerge from them in a few hours. This is generally on the seventh day after the stock has swarmed, but if the issue of the swarm has been delayed by bad weather, some of the queen-cells may be ripe before the seventh day, and the work should be done earlier. Two queen-cells should be given to each colony or nucleus if they can be spared, for then, should any accident happen to one of the queens, her place will be taken by the other without delay. To find the queen cells, the bee-keeper should, if necessary, brush the bees from the combs with a feather. Shaking the combs is liable to injure the immature queens. In cutting out the queen-cells, care must be taken not to damage them. For this purpose plenty of the surrounding comb should be cut away with them, and queen-cells that are joined to one another should not be separated. Very small queen-cells, especially if they are crooked, should be rejected; they are likely to produce under-sized queens. Thick cells of medium length generally contain the best-developed queens. The queen can often be seen inside the cell by holding it before a strong light. Before they have time to get chilled, the queen-cells should be inserted, tip downwards, as in nature, between two combs of brood; they should be placed in the warmest part of the brood-nest. They need only be wedged between the combs sufficiently to prevent their dropping down, as the bees will soon fix them securely. It is, however, advisable to

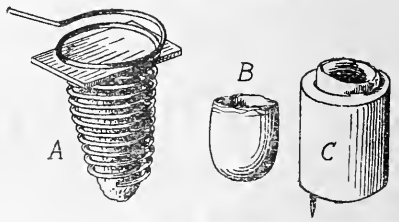


Fig. 1.—*A*. Queen-cell protector, containing queen-cell with cover. *B*. Dipped cup. *C*. Pressed cup in wooden holder with spike for attaching to bar of frame.

previously place each queen-cell in a spiral wire protector (see Fig. 1 A), which protects the sides of the queen-cell from being torn open by hostile bees. A tin cover is slipped through the top of the protector, and the projecting end of the wire is pressed into one of the combs.

The young queens will probably become fertilised, and will commence laying in 10 to 20 days from the time that the ripe queen-cells were distributed.

A good and easy way of obtaining a few spare queens, by which the necessity of cutting out the queen-cells is avoided, is to divide the stock into nuclei on the evening of the seventh day after the first swarm has gone off. Each nucleus should consist of three combs (with the adhering bees), placed in a separate hive, and warmly wrapped up, the flight-hole being reduced to the size of 2 in. by $\frac{3}{8}$ in. There should be brood, and at least one well-formed queen-cell, on the central comb, and the other combs should contain plenty of honey. The bees being strongly at-

tracted by the maturing brood and queen-cells, and a large number of them, being too young to have taken their first flight, only a few will return to the parent stock the next day. There being no eggs or young larvæ in the combs, the brood is not easily chilled; but it is important that there should be a sufficient number of bees to keep it warm. The nucleus in the parent hive need contain only sufficient bees to cover two combs, because their number will be largely augmented by bees returning from the other nuclei (see "Nuclei").

Artificial Methods of Rearing Queens.—By the above-described plan, it is not possible to obtain more than one fertile queen per hive in the year, for by the time she begins to lay eggs the swarming season is over, and no more natural queen-cells are obtainable. Bees deprived of their queen will, however, rear queens at any time of the year from sufficiently young worker larvæ, if these are present in the hive, by feeding them with an abundance of the special food known as "royal jelly*"—that is supplied to normal queen larvæ, the cells containing the larvæ being at the same time enlarged and formed into queen-cells. This instinct is utilised in all systems of rearing queens.

In average seasons it is impossible to get queens fertilised in England earlier than the beginning of May or later than the middle of September, and it is, therefore, useless to rear them outside of these dates. Queens are easiest reared and quickest fertilised in June and July, and the beginner should rear them only during these two months.

Queen-cells can, of course, be obtained by simply removing a queen from her colony, but such cells sometimes produce imperfectly developed queens through the bees selecting larvæ that are too old, and the cells cannot be separated without mutilating the combs of brood. Most queen-breeders now make artificial queen-cells or cups, and place very young worker larvæ in them; the larvæ are then given to specially-prepared colonies to be fed up into queens.

Artificial Queen-cups.—These cups (Fig. 1 B) are made by their originator, G. M. Doolittle† (New York State), by dipping the moistened tip of a wooden stick (Fig. 2 D), previously whittled and sand-papered to the shape of the inside of a natural queen-cell, into beeswax heated only slightly above the melting point, to a depth of about $\frac{1}{2}$ in., six or seven times. It is important that the inside surface of the cup should be smooth and round, and the inside diameter at the mouth should be barely $\frac{3}{8}$ in. About a dozen of these cups should be fastened by drops of melted wax about $\frac{3}{4}$ in. apart (from centre to centre) to the middle of a bar of wood $\frac{1}{4}$ in. thick by $\frac{5}{8}$ in. wide (Fig. 3); this bar having been fixed horizontally across the lower part of a standard frame 3 in. from the bottom,

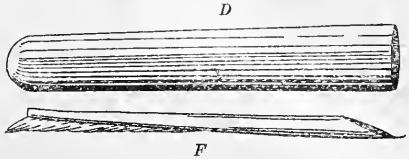


Fig. 2.—*D.* Forming stick. *F.* Quill for transferring larvæ.

by a nail through each end bar; the nails act as pivots on which the bar can be turned slightly. The wax at the point of attachment should be thick, in order that when the queen-cells are cut off the bar to be distributed to the nuclei, the knife may not enter them. A block of wood fills the upper part of the frame.

The necessity of cutting off the queen-cells may be avoided by mounting each cup on a small wooden block or holder, which is fixed to the frame in such a way that it can easily be detached. This can be satisfactorily done by means of a sharp spike or nail point projecting about $\frac{1}{8}$ in., a method recommended and employed by the A. I. Root Company (Ohio). The wooden holders can be used repeatedly.

Pratt (Pennsylvania) has lately introduced pressed cups, which differ from the dipped cups of Doolittle in several particulars. Beeswax heated slightly above the melting point is poured into small

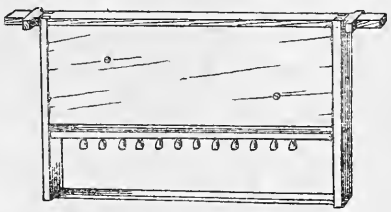


Fig. 3.—Frame of cups.

holes bored in the wooden holders, and is allowed to cool. The holders are then stood in a warm place, and, when the wax becomes of the consistency of putty, smooth, round cavities are made by pressing the moistened forming stick into them.

The holes are slightly larger than the forming stick, and the wax oozes out in a thin ribbon, which forms the commencement of the cell wall. A pressed cup, in wooden holder, with nail point attached, is shown at C, Fig 1.

(*Continued in our next.*)

* This is really chyle food. Its nature is explained in Cowan's "Honey Bee," pp. 119 to 125.

† "Scientific Queen-rearing," by G. M. Doolittle (1889). Mr. Cowan says: "Although Doolittle was the introducer of artificial queen-cells for queen-rearing, Mr. Wood, of Denmark, introduced and exhibited artificial queen-cells made exactly on the same plan in 1875, but these were used for introducing queens."

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

QUEEN-REARING.

MR. J. RYMER'S METHOD.

[5459.]—Since writing the letter (5431, page 63) on the above I have been reading Doolittle's book, "Scientific Queen-rearing." I think Mr. Rymer will readily admit that the author is an authority on the subject, and knows more of queen-rearing than either of us. On page 23 Mr. Doolittle says:—

"Then came the following process, which I often see given at the present time, as one by which prolific and long-lived queens can be obtained.

"Take a frame of new comb and put in the colony having the breeding queen. Leave it there till you see the first larvæ hatched, when it is to be taken out, the bees shaken off, and then placed in an empty hive that is to be put on a stand of a populous colony, after moving the colony away. This is to be done in the middle of the day, when plenty of bees are flying.

"After trying this method of procedure a few times, I came to the conclusion that it was one of the very poorest given to the public, nearly, if not quite, as inferior as were those reared in the little nucleus-boxes."

Then another method is described, after which the author continues:—

"And how could it well be otherwise? For by such a plan only field-bees were obtained as nurses, while Nature designed young bees to do the work. While in early spring old bees do nurse brood by their being brought up gradually to it, yet in this case the bees that had gone out in search of honey, with no idea of ever again being called upon to nurse brood, and with a good mother in the hive when they left, were suddenly confronted with starving larvæ, from which they must rear a queen at once, while chyme, or royal jelly, was the most remote thing which their stomachs contained. This is one of the many plans which go almost in direct opposition to Nature's laws, and one that I claim should never be used if we want to have bees improving instead of retrograding."

I make no comment on the above, but on page 74 Mr. Rymer speaks of "the comb of eggs remaining in the hive three or four days." He misunderstands me. The three or four days date from the time the *empty* comb is placed in the hive, and even supposing eggs to be laid therein at once, they will not hatch till the fourth day (see Mr. Cowan's "Guide Book," page 11). Why, therefore, should he speak of raising queens from larvæ three days old? I never said anything about larvæ three days old, and certainly consider them quite unfit for queen-rearing. I also prefer queens raised from larvæ straight away from the first day of their existence. On this subject Doolittle says, on page 29 of his book:—

"I have carefully watched, time and time again, to find out if an egg laid in a queen-cell was treated any differently for the first four days (after it was deposited in such cell by a queen) than an egg laid in a worker-cell, and as yet I have failed to find any difference; so if any bee-keepers have seen what is described above they have seen something that I have never been able to discover."

This last sentence refers to a statement that the egg in a queen-cell is surrounded by royal jelly *before* it hatches.

In the last paragraph of his letter Mr. Rymer says that his queens leave the hive on the third day and upwards. Cowan's "Guide Book" gives the earliest date for a queen to leave the hive for flight as the fifth day. There is a discrepancy somewhere.

Regarding his statement anent the queens he received from me, I would point out that they most decidedly were not under the same conditions as his own. To begin with, they had been through the post, and as a result had to be placed in a freshly made nucleus, made up according to instructions sent with the queens. Hence the comparison is not on a par. Also he carefully states, "weather permitting," when speaking of his own queens. The six queens referred to are judged irrespective of this. All I can say is that, "weather permitting," the result is most unusual, and from the numerous testimonials received I judge it to be unusual in most cases.

I have had cases where the queens have not been accepted, but on inquiry have elicited the fact that the special instructions sent with the queens had not been complied with in every detail.

In order to be "master of the situation" I have built a house specially for queen-rearing, so that my operations may be carried out in the proper temperature, a condition difficult to secure in our most erratic climate.—D. G. TAYLOR, Ilminster, February 29.

[We regret that our limited space compels us to omit a portion of the very copious extracts from Mr. Doolittle's work, which latter is available to any readers sufficiently interested in the subject.—EDS.]

(*Correspondence continued on page* 96.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

We are glad to illustrate below the neat and orderly apiary of our friend Mr. Sawyer, who may be taken as a bee-keeper of the right type, *i.e.*, one who makes a success of the pursuit. The man who is handicapped with difficulties at the outset, and sets about overcoming them by reading and studying the subject, will never go far wrong, as the following notes, which need no addition from us, plainly show. He says:—

"I owe my start in bee-keeping to reading an article on the subject in a magazine in 1894, and to being fond of honey. The double impulse prompted me to accept an offer of a stock in a frame-hive, which I placed in my garden. Knowing nothing whatever about bees, I had to depend on the vendor for guidance at the start. What his advice was worth may be judged from the fact that in the spring of '95 he told me to 'buy a pennyworth of sweets, and put in the hive-entrance, as he thought the bees were getting short of stores.' The hive was supposed to contain eight standard frames. I suggested putting in more, not liking so much empty space in the hive. The idea also occurred to me to tier up in what I afterwards found was the orthodox way. But as my guide disagreed I yielded to what I then believed to be his superior knowledge. Later on I heard of the hand-book 'Modern Bee-keeping,' which I at once got. Then followed the 'Guide Book,' and, subsequently, I became a reader of your weekly the B.B.J. and the *B.K. Record*, along with other bee literature, which I thoroughly studied. I had now fairly got the bee-fever, and being like most boys anxious to 'see how the figure worked' mustered up enough courage to open the hive. The first thing I found was that it contained only four frames and three sections, which formed the brood-chamber, a sufficient proof of the need for getting competent advice before purchasing. Having a wholesome dread of stings I donned a pair of thick leather gloves, only to discover that the bees had adopted the policy of retaliation, for in spite of gloves I had to seek medical aid, and carry my right arm in a sling for a few days! Later on I discarded gloves, and, in consequence, had fewer stings, so the inconvenient effects were less noticeable. Having gradually increased my stocks, I moved to my present location, which is about half a mile from my residence. It is not an ideal spot for bees, being cold and in a rather exposed position, but it was the best I could get. Being an out-apiary I cannot claim to have secured any big 'takes,' but have had enough to put the financial balance of the undertaking on the right side, and as it often brings me other business, which, perhaps, I should not get, I think I am well repaid for the time spent, to say nothing of the recreation it affords. I find the query column in the B.B.J. very instruc-

MR ALBERT E. SAWYER'S APIARY, CIRENCESTER, GLOUCESTERSHIRE.

tive; my plan is to read the question, and answer it in my own mind, then read your reply. In this way I have learned a great deal.

"Like many bee-keepers, I make my own appliances at odd times. The majority of the hives in the photo are made from 'Quaker Oats' boxes on the 'W.B.C.' plan (from drawings published in the *Record* some years back), and this is the style of hive I prefer to any other. The swarm-catcher in the foreground (which was used last season for the first time, but unfortunately the stock did not swarm) is made similar to the 'Edwards,' but on a special floorboard, with the tunnels sunk in flush with the top. This avoids the empty space under the frames, and stops brace combs. The persons in the photo are myself and children. My wife could not be persuaded to face the ordeal."

CORRESPONDENCE.

(*Continued from page* 94.)

FEEDING BEES

WHILE "ROBBING" IN AUTUMN.

[5460.] There is no detail in bee-keeping, in my opinion, more important than that of feeding, in which term may be included both food and method. No doubt what I have to say on the subject will be regarded as heterodox by a great number of apiarists, but the following account simply details my experiments and gives the result.

In the autumn of 1902 I found on getting my hives home from the moors that they were as a rule deficient in stores after such a wet season. Robbing was persistent, and it was almost impossible to stop it; inside feeding, of course, aggravates the evil, but something had to be done. Finding that I could buy foreign honey (guaranteed genuine) at 3d. per lb. I procured 2 cwt., which was mixed with ordinary feeding-syrup when hot, as it was required for use. So far for the food, next for the method, which after many experiments, and taking everything into consideration, I found to be the best. Choosing the sunniest spots near the hives I put up temporary shelters about 2½ square feet area, and 2 feet high in front, sloping to the back. This was covered by old floor-cloth to keep off showers. The syrup was placed under this in ashets, flat plates, etc., with a considerable quantity of strong straws cut about 3 inches long on the top to prevent the bees from drowning in the syrup. The ashets, etc., were set on anything convenient to keep them about a foot from the ground. It was also necessary to strew a thick coating of straw for 2 or 3 feet around, as many of the bees so gorged themselves that, unable to fly, they crawled away to the cold damp ground and perished. Whereas on the straw and in the sunshine they soon were able to fly again. This method was most successful, and "robbing" was stopped at once as the robber bees were drawn to the new supply of food offered. Adverse weather stopped the process when I had about 28 pounds of honey left, and this was used in stimulative feeding in the following spring, given, of course, inside the hives. The result was that my stocks were in the best of condition for the 1903 season's work, and did well considering the unfavourable weather. Believing they could not have a sufficiency of food for the winter I again provided myself with a supply of honey by the time the hives were brought home from the moors. The bees were, however, in much better state than I had expected with the exception of one stock, which was robbed out, and another found to be queenless. "Robbing" began on the very day they returned. Outdoor feeding was again started, but on account of wintry weather it had to be stopped after 1 cwt. of honey had been used. As before the robbing stopped when the feeding began. Again the result was excellent. Taking advantage of a milder day than usual last week, I had a peep in, without uncovering much of the frames, and could see that the bees were extra strong, and with only one or two exceptions they had plenty of stores. Besides this method I have often hung outside old frames for the bees to empty of honey, and have also dipped old frames of comb in syrup, in a bath made for the purpose, and hung outside with no drawbacks whatever.

It may be admitted that this is a plan for autumn outside, quick feeding only, but as I have found it more successful than any other system I have tried, and with so much less labour, I desire to give it publicity.

I know these methods could not be recommended in every case, as in many instances one would be feeding their neighbours' bees as well as their own. In my case, however, neighbours' bees were a negligible quantity, which admitted of my plan being successful. I send name, etc., and sign—S., Nairn, N.B., March 5.

RAILWAY RATES.

[5461.] I fear I did not make myself sufficiently clear in my former letter (5422, page 56). Let me again state my case. First, railway companies will "only accept comb honey for conveyance at owner's risk" (*vide* rules under owner's risk scale of rates). Next, I wish to point out that the railway companies cannot under present conditions be held responsible for anything that occurs under the owner's risk. I have it direct from the goods manager of an important

line that they are not legally responsible for anything except proof of wilful negligence, and that is impossible to prove. I can produce plenty of evidence to show their refusal to act justly under owner's risk rates, and from these two facts—comb honey at owner's risk only, and non-liability of the company. I draw this deduction, that it is absolutely useless to produce comb honey to send by rail, as your honey is at the mercy of the railway companies. I cannot understand how comb honey is sent at company's risk. I suppose exhibitors and producers pay the higher company's risk charges, and if they have any damage they will find they cannot get any compensation. I have approached the Board ofAgriculture, and our good champion, Mr. George White, M.P., has interviewed that Board. They first said they would take our evidence, now they say they will not, so Mr. White has decided to raise the question of O.R. on the discussion of the Estimates. I want our Bee-keepers' Association to get together statistics of the way these O.R. rules are prejudicial to honey producers, then fight the matter as we are doing in the flower trade. Now is the time, and if we are to receive practical benefit let us try for it. Let every bee-keeper write his local M.P. to be in his place to support Mr. White, pointing out the disabilities imposed by the railway, and we may get far more than many an isolated case in the courts at less expense.—W. J. Belderson, Terrington, March 7.

CAMBS BEE-KEEPERS' ASSOCIATION.

[5462.] I have been glad to see in your last two or three issues letters from Cambs. bee-keepers referring to the Association and its future chance of success. I quite agree with "Chaucer" (5436), both myself and the Vicar here will be glad to join, and hope it will be a success.—C. D., Sutton, Isle of Ely.

VENTILATED FLOORS FOR HIVES.

[5463.] Seeing an advertisement in B.B.J. of February 11 of bees for sale in ventilated hives, I sent for one of them, and am delighted with the idea, and the strong colony of bees sent me. It consists of an under floor screwed to the original one; where the screws go are slots, which the under floor slides on. The original floor has holes in it, corresponding to holes in movable floor; the holes next to bees are covered with perforated zinc, so the hive can be regulated to the will of the operator, for travelling invaluable. I am given to understand that not one hive swarmed where this invention was added. To those about to make new hives, and believe in ventilating floorboards, I strongly advise to use this plan of securing ventilation. Perhaps the gentleman who invented it would explain its construction more fully in your pages. I send name, and sign—Zero, West Melton, Yorkshire.

BEE-KEEPING IN EVENING SCHOOLS

AS TAUGHT BY A SCHOOLMASTER.

[5464.] Some of the County Councils have bee-keeping on the lists of subjects that may be taken in Evening Continuation Schools, and as the Kent C.C. is one of them I naturally put that down as part of this session's work. I soon found my class of lads eagerly looked forward to the weekly lesson, and followed each one with interest. This interest I did my best to keep up, and I think with success. H.M. Inspector at his visit expressed his surprise at the bee knowledge that the lads showed, and when he spoke of the worker as a "neuter" several inquiring looks from the lads were directed towards me. Talky-talk is all very well from the teacher, but when they had all the different bee implements to see, handle, and use it was surprising to find how keenly each one entered into the reasons of using such. There is nothing like letting pupils do things for themselves, so they have had to fix skeps as if for driving, use the smoker, fix in foundation, and put a hive together, and take it to pieces. Unfortunately, one of my stocks I found to be suffering from dysentery. Here is a chance, thought I, for another practical lesson, so on the final evening we had the room beautifully warm (it was freezing hard outside), two of the lads fetched in the hive into the schoolroom, and then the business of putting them into another hive was gone through. One of the school managers, a strong anti-tobacconist, "smoked" excellently that night, and the operations were carried out most successfully. Each frame was closely examined, and soon a boy spotted "the lady." Then, the hive was warmly packed, and left by the fire until the morning. As I have said the whole was carried out successfully, and, I think, you must say that my efforts in the cause of spreading bee-keeping in the little world in which I live ought to bear fruit.—Arthur J. Dover, Platt, Sevenoaks.

"HONEY WITHOUT BEES."

[5465.] Since I wrote last I have received a letter from a medical officer of health giving his views on the matter, which I send for publication in the Bee Journal. It is marked "private," therefore name and address are withheld. I think, however, that though unknown to them by name all bee-keepers will feel grateful to the gentleman in question, who has shown

so much courtesy in the matter. Here is his letter:—

"DEAR SIR,—In further reference to yours of the 15th ult. in regard to malted honey I have to say that I have had a careful analysis made. The term malted honey for such a substance as this is certainly most objectionable, but in view of the fact that the label in addition to the words 'malted honey' contains a description of the substance I do not think that a case could be taken under the Sale of Food and Drugs Acts, as apparently there is a sufficient disclosure of the contents. I am not sure on the point, but I think a case might be taken under the Merchandise Marks Act, although I should advise you to consult your solicitor before taking any steps in this direction.—Believe me, yours faithfully, ————, Medical Officer of Health."

I cannot myself take any further steps in this matter, it concerns all bee-keepers not one individual; I think I have done all that an individual can be expected to do so far, and would like to hear the views of others on the matter. I will watch the future advertisements of this product, and communicate same; if we consider that the description continues to be prejudicial to the bee-keeping industry action of some sort should certainly be taken.

I am entirely opposed to artificial chemical substitutes for natural foods, apart altogether from my interest in the bees, and I think it contrary to the interests of the human race that we should be forsaking the healthy life of the country and be dependent on cities and factories for our daily needs. The real reason why we bee-keepers are so fascinated with our bees is because we love Nature. All bee-men have something of the true naturalist in them. If we only could get our people to see that they are no better or happier for all their material wealth what a change we might expect.—W. J. FARMER, Truro, March 7.

BEES BY CUBIC MEASURE.

[5466.] Allow me to thank your correspondent "D. M. M., Banff," for his notice of my "riddle" on page 78. But I must point out to him that a fair or "respectable" swarm would fill an ordinary skep or large bucket, containing 1,000 cubic inches, or just over 3 gallons and 4½ lbs. weight, and as the swarm in question contained 2,700 to 3,000 cubic inches, equal to 10 or 11 gallons, it would weigh over 12 lbs., and contain 60,000 bees. Thus, my estimate of 20 to the cubic inch is quite fair, and I "nail it to the mast."

Bees lying close together would count 40 to 45 in a cubic inch. I have never seen any calculation of the number of young bees in a combed frame of brood. There are, however, 25 cells in each square inch, thus, a "standard frame" contains 108 square inches, superficial measure. Thus, allowing the odd 8 inches for unfilled cells it works out at 2,500 cells on each side—5,000 to one well-filled frame, and with 10, 11, or 12 frames of brood in various stages. I calculate on there being 70,000 to 100,000 bees in a fair stock. Of course, not all the frames will have brood from outside to outside each way, and these only during May, June, and July.

With regard to "'Leaky roofs" mentioned on page 79, any fairly good joiner can make roofs waterproof with reasonably sound boards. But if anyone can prepare them in a special manner, he is within his own strict right in offering the device at a price. I think Mr. Loveday's remarks on page 63 are quite outside the mark on that subject. The bees and their owners doubtless appreciate sound roofs; it does not seem a vital necessity. One skep I "took up" last September had a small pool of water in the hollow of top, being only covered with two narrow boards. This I placed in a box hive, and have managed to get dried, and bees seem all right. They had propolised the roof till waterproof.—PRACTICAL EXPERIENCE, Wavendon, Bucks.

Queries and Replies.

[3336.] *Making the "W. B. C." Hive.*—I am much obliged to Mr. Lainchbury for his letter in the issue of March 3 (page 87). I have been able to see my mistake respecting the metal runners, but he says that the latter should be nailed on so as to raise the frames up flush with the top of body-box. I find that my frames are still ⅛ in. below the top of body-box. Again, the instructions contained in the "Note-Book" mention two strips of thin wood ⅜ in. wide and 16½ in. long. What position do these strips take and what purpose do they serve? I should be very grateful if your correspondent who so kindly assisted me before, would assist me on these two points. Also I may add that I am using ⅜ in. metal ends.—E. P., ANXIOUS, Gravesend, March 7.

REPLY.—The "strips" mentioned in "Note-Book" are placed between the outside frames and the hive-side in order to prevent the bees from attaching the outer face of comb to the side of the hive.

[3337.] *Building a Bee House.*—Very many thanks for your answer to a few queries of mine a week or so ago. I anticipate building a bee-house (not a bee cupboard) for 20 hives or so, similar in construction to one of a Mr. Edward Gibbins, Neath, Glamorganshire, and who gave the instructions for building the same in BEE

JOURNAL, April 10, 1890. In several numbers of your paper for that year (January to April 10) there appeared articles on the subject in question, but since then I have seen or heard very little about such structures. I should prefer all the entrances facing south, and two rows of hives 18 inches or so apart, alighting boards painted different colours. Then, the dimensions of the house will be 8 feet wide and 8 feet high to the wall-plate, or if a long side and a short one I have decided on the former 10 feet high and the latter 8 feet high, the sides, ends, floor, and inside of roof to be matchboarded with ¾ inch stuff and tarred outside, with a corrugated covering for the roof. This is a brief description of one I am thinking of, but, of course, there are other fittings, such as revolving windows and ventilators, with a door at one end. I should like to hear your advice, and others' too, if you think well, on the matter, before constructing the same, which will greatly oblige—J. S. C., Leicester, March 5.

REPLY.—Beyond referring you to the illustrated description of "How to Build a Bee-house," which appeared in last year's volume, we cannot suggest any improvement on the plan given above.

[3338.] *A Lady Beginner's Queries.*—Being a subscriber to the B.B.J. I am writing to ask your advice in the following circumstances: We began bee-keeping in 1903 with one stock and two swarms. On opening the hives the other day to give the bees some candy I found under the quilts three white grubs, which crawled out of the propolis on the top-bars of the frames. They were about one inch long, and moved quickly. I fear they may be wax-moth, as we killed two white moths hovering near this hive last summer. Then, on lifting out one of the frames, the bottom-bar gave way, and fell back into the hive. The comb was intact, and had brood in it. I believe several of the frames are damaged, and should like to replace them with new ones before next season, but breeding has already begun, and I did not like to take out combs containing brood and waste them. I have a new hive into which I want to transfer this stock, and would like to know the best way to manage this, when the weather is warm enough to do so without chilling the brood. Here we have generally a very mild spring. Is it best to place the clean hive on the site of the old, and then shift the frames from one to the other? I, therefore, ask: 1. What is the best remedy for wax-moth or caterpillar? 2. What can I do with broken frames? 3. How must I shift bees into clean hive? 4. Is it a good plan to give bees brood-foundation now to draw out (the stock is a very strong one, and covers nine combs now, so that they will probably swarm later on), and if so, do you give beeswax on top of the frames to help the bees in their work? 5. What to do when giving racks of sections? We are only beginners, and so have no surplus empty combs in case of our getting a swarm. Hives "two" and "three" now contain strong stocks, and seem to have wintered well. Might they also have a sheet of brood foundation to draw out? I omitted to mention that owing to the honey harvest ending suddenly here, we were left with a number of sections just begun to be filled, which we ought to have given to the bees to empty, but instead we put them away. The honey is now fermented, but in some cases there are not more than two or three cells filled. Would it be possible to use the sections if they were sprayed with some disinfecting solution? Or would it be best to melt down the wax? I trust that this letter is not too long, but I should be so glad to get some advice on these points.—MARGUERITE F. GIBSON, Newport, Isle of Wight, March 5.

REPLY.—1. As the moth-larva seen is described as "an inch long" it is doubtless that of the true wax-moth. The best remedy for this pest is keeping stocks strong, and thus allowing the bees to defend themselves. 2. The frames will work without bottom-bar until combs are renewed. 3. We fear you will need some friendly help on the spot in doing this. To detail all the work required to a lady beginner is quite beyond the limits of our reply column. 4. The bees might be employed in drawing out foundation to replace the combs in broken frames later on. 5. We may sum up our replies by advising the purchase of a "Guide Book," which contains all the information required.

[3339.] *Disinfecting Hives.*—I have two hives the bees in which were infected with foul brood. No. 1, I destroyed all bees, quilts, frames, etc., and then boiled the hive, and scraped off as much of the paint as possible. Painted it thoroughly with Calvert's No. 5 carbolic, and then gave it a fresh coat of white paint; I then again boiled it, and did it with carbolic and another coat of paint. No. 2, the bees of which died last December, partly from want of stores and through being a weak stock. I have boiled the hive, scraped it, painted with carbolic, and given it a fresh coat of paint. Do you consider the hives will now be safe to use, or ought I to boil them again and paint, etc.? I am afraid the foul brood was of rather old-standing. I shall be glad of an answer in your "Queries and Replies." I enclose my name and sign myself—CANDY.

REPLY.—The hives should be perfectly safe to use if the disinfecting is as thorough as described.

[3340.] *Bees in Hive Roof.*—I will be much obliged if you would advise me what

course to take in the following circumstances:—A neighbour has only one hive, the bees of which last summer during his absence from home got established in the roof of the hive through some one interfering with them, and omitting to put on the quilt when closing up. This was discovered near the end of last season when too late to transfer them. The bees were fed liberally with syrup through a hole bored in the roof, which was then closed up, and the roof protected with a waterproof covering with sacking underneath. So far the bees have wintered safely. Would you kindly say what I should do to have the bees removed, either to the frames in the body-box, or into a new hive? Thanking you for past favours. I send name, etc., and sign —A. B. C., Strachur, N.B.

REPLY.—If the help of an experienced bee-man is available it should be secured, as the operation in question is not an easy one. It involves cutting out the combs and tying them into frames without destroying the brood in them. Let us know if help cannot be got, and in that case we will endeavour to direct you in print.

WEATHER REPORT.

WESTBOURNE, SUSSEX,
February, 1904.

Rainfall, 3.79 in.	Minimum on grass 21° on 29th.
Heaviest fall, ·48 on 12th.	Frosty nights, 15.
Rain fell on 23 days.	Mean maximum, 43·3.
Above average, 1·86.	Mean minimum, 33·8.
Sunshine, 94·3 hours.	Mean temperature, 38·5.
Brightest day, 23rd, 7·5 hours.	Above average, 0·8.
Sunless days, 6.	Maximum barometer, 30 38 on 25th.
Above average, 18·9 hours.	Minimum barometer, 28·83 on 9th.
Maximum temperature, 50° on 12th and 22nd.	
Minimum temperature, 27° on 29th.	

L. B. BIRKETT.

Echoes from the Hives.

Thornton Dale, Yorks., March 7.—March, the herald of spring, has come in true to the old saying, like a lion, let us hope it will go out like a lamb. The cold spell of weather experienced lately has made the bees keep closer quarters than at any other time this winter. So far the death-rate out of my 60 odd stocks is nil. Just now, however, is the most trying time for any stocks not too well supplied with stores. Gardening operations are at a standstill here, the cold and wet considerably delaying early seed sowing. Hoping the year 1904 will be a successful honey year.—G. A. B.

Barnwell, Oundle, March 7.—The weather this afternoon was mild, and my bees were flying about in great numbers. I was watching one hive when I noticed a bee dragging out a fully developed young one. I also saw another hive had two or three young bees undeveloped dead on the alighting board, so that the queens of these stocks must have started breeding about a fortnight ago. At that time I recollect seeing the bees crowding in with pollen from aconites, which latter were in bloom about that date.—W. A.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

*** A correspondent dating from Cogon, Penarth, writes:—"Will Mr. 'B. H. S.,' who writes on page 70 of B.B.J., be so kind as to give the particulars of the secret of candy-making for the help of other readers of B.B.J. and bee-keepers?"

BASIL G. BUCKWELL (Acton, W.).—Painting Bee-appliances.—Some bee-keepers paint the outsides of extractors and other tin goods, and it cannot be harmful to do this, but most practical hands only paint such parts as are of iron and apt to become rusty. Tinwork is best kept clean by washing and drying well before putting away after a season's work.

R. W. (Sidmouth).—Honey Sample.—We should be rather sorry to use good honey like sample in feeding bees. Its pronounced heather flavour makes it excellent for table use, and far more valuable than the ordinary sugar used for bee-food. Being granulated it could be given to bees as proposed.

CONSTANTINE (York).—Honey Sample.—There is nothing wrong with the honey sent, the colour being nothing out of the ordinary.

(MRS.) OWEN JONES (Caerleon).—Transferring Bees from Skeps to Frame Hives.—You had better allow the bees to transfer themselves, as directed in Cowan's "Guide Book."

M. M. W. (Tetbury).—Feeding Bees in Skeps.—If there is no feed-hole in top of skep cut one. It is quite easy to do this by using a pointed knife. Don't attempt to give the food outside; it will only attract robbers.

*** *Some Letters and Queries, already in type, are held over till next week for lack of space.*

Editorial, Notices, &c.

CAMBS. AND ISLE OF ELY B.K.A.

MEETING AT CAMBRIDGE.

A meeting of bee-keepers was held—in response to the notice in B.B.J.—at Cambridge, on March 5, when considerable enthusiasm was shown in favour of the formation of a vigorous organisation in aid of bee-culture and bee-men's aspirations. In the absence of Mr. Dunn-Gardner, Mr. C. J. Mapey was voted to the chair. It was hoped that Mr. Mapey might be induced to take the office of secretary, but as that gentleman could not give the time necessary Mr. White proposed Mr. Rogers. This was seconded by Mr. Ford, and carried unanimously. With a few slight alterations the rules of the Lincolnshire B.K.A. were adopted. A. Peckover, Esq., Lord-Lieutenant of the County, was re-elected President, and, according to rule, all subscribers of half-a-guinea become vice-presidents. Mr. J. Sanders became one of the first vice-presidents, and L. Tebbutt, Esq., C.C., was elected treasurer, and Messrs. Richard Brown and C. N. White, honorary experts, with Messrs. Shrubbs and Short, auditors. The following gentlemen were elected members of Executive Committee: Messrs. Allen, Mapey, Ford, Hills, Short, Moore, and Brown, and the following were chosen district secretaries, with power to add to their number:—Mr. J. Nightingale, Doddington; Mr. Mapey, Cherry Hinton; Mr. Hills, Comberton; Mr. Ford, Burwell; Mr. Allen, Cambridge; Mr. Billing, Elsworth; and Mr. Seamark, Willingham. A good start having been made it was decided to ascertain the support likely to be given by bee-keepers and others throughout the county, and then hold another meeting to formulate a plan of work for the season. Votes of thanks to Mr. White for his services in the past and to the chairman closed a very successful meeting.—*(Communicated.)*

LEICESTERSHIRE B.K.A.

ANNUAL MEETING.

The annual meeting of the above association was held at the Victoria Coffee House, Leicester, on the 5th inst., Mr. G. O. Nicholson, one of the vice-presidents, occupying the chair. Among those present were Messrs. W. P. Meadows, A. Brown, J. Fewkes, A. S. Shenton, G. J. Levins, J. E. T. Wright, G. Palmer, C. W. Brown, E. J. Underwood, H. Bradbury, G. Billson, J. G. Payne, T. H. Geary, J. W. Smith, and Miss Throsby, with Messrs. A. G. Pugh and Geo. Hayes of the Notts B.K.A.

In his opening remarks the chairman pointed out that one of the primary objects of the association was to encourage bee-keeping, especially among cottagers. He felt sure that if more cottagers kept bees they would find them not only interesting but a source of profit.

The 22nd annual report recorded a satisfactory year's work with a balance to the good of £11 17s. 7d. There is also a steady increase in the number of members, showing a total of 225 names. The report and balance-sheet were adopted. The Duke of Rutland was again elected as president. The officers and committee were re-appointed, with a few changes, owing to resignations. Mr. Waterfield was re-elected secretary, with an increase in his honorarium from £7 10s. to £10. The honorary secretary briefly returned thanks. Messrs. Meadows and Waterfield were again elected as representatives at meetings of the British Bee-keepers' Association in London. The chairman then distributed the prizes and certificates won during 1903, after which a meat tea was served, nearly 100 sitting down. Tea was followed by a musical entertainment and brief addresses on "Feeders and Feeding Bees" and "Improved Queen Rearing," by Messrs. G. Franklin, expert to the Bee-keepers' Association, and J. Geary, F.H.S., of Barwell, respectively. Prize drawings also took place. A very enjoyable evening closed with the usual votes of thanks.—*(Communicated.)*

ESSEX AND SUFFOLK B.K.A.

ANNUAL MEETING.

The annual meeting was held on March 10 at the Devonshire Hotel, London. Among those present were Messrs. Alder, Dearden, Salmon, Sheppard, Snelling, White, and Mrs. C. P. Ford. Mr. White was voted to the chair. The minutes and report were read and adopted. The financial condition of the association continues to be satisfactory. The receipts for 1903 were £135 4s. 9d., and the expenses £124 15s. 7d., thus leaving a balance in hand of £10 9s. 2d. Ninety-seven new names were enrolled during the year, the membership now totalling 446. The Countess of Warwick was re-elected president. Vice-presidents, the Bishop of Colchester, Sir T. Fowell Buxton, Rev. E. Bartrum, P. Bread, Esq., C. N. Brooks, Esq., Colonel Davis, Miss Courage, C. F. Harding, Esq., Owen Parry, Esq., J. P. Tritton, Esq., and Miss Willmott. Honorary treasurer, W. M. Tufnell, Esq.; honorary secretary, Mr. W. J. Sheppard. The committee were re-elected, excepting Mr. T. I. Weston, who has resigned. Messrs. C. B. Snelling, J. R. Pulham, and Mrs. C. P. Ford were also added to the committee. In the place of Mr. W. A. Withycombe (resigned), Mr. J. Herrod was appointed expert for Essex, and

Mr. A. W. Salmon has undertaken the expert work for Suffolk.

During the summer months lectures and demonstrations in practical apiculture were given at local flower shows and similar functions in both counties. This means of helping bee-keepers should be adopted wherever possible, as many attribute their success chiefly to attending the lectures. It would assist the committee very much if bee-keepers would allow the use of their apiaries when lectures are arranged for one or two days, as the case may be. The number of members who hold the 3rd B.B.K.A. certificates has increased. This will enable bee-keepers to get advice on bee-matters from reliable and competent persons.

The experts' spring tours will commence early in April. Bee-keepers who wish to have a visit during the tour should write to the honorary secretary, Chingford, Essex.

An examination for 3rd class certificates was held at Chelmsford during September, Mr. and Miss Bott kindly lending their apiary for the occasion.—*(Communicated)*

QUEEN-REARING IN ENGLAND.

By F. W. L. Sladen, F.E.S.

(Continued fro n page 93.)

Transferring the Larvæ.—A very young worker larva of the strain that it is desired to propagate is placed in each of the cups. It is desirable, but not absolutely necessary, to previously put a little royal jelly into the cups. The jelly must be fresh from the bees, and should be taken from an unsealed queen-cell. A small quantity, about the size of a No. 2 shot, should be spread in the bottom of each cup.

For lifting the larvæ out of their own cells and into the cups, a quill with the point sharpened and slightly turned up as shown (Fig. 2 F), is used by Doolittle, and answers very well. Some breeders use a fine camel's hair brush. The larvæ selected should be under the age of two days, and of uniform size. Larvæ much over two days old will produce inferior queens, and must not be used. Bee-keepers who cannot estimate the age of a larva by its appearance should select larvæ that are about 1-12 in. in length. The tip of the quill should be carefully slipped under the larva, which must be raised on it with as much of its food adhering to it as possible, and then the larva is deposited in the bottom of the cup in the same position that it occupied in its own cell, the quill being drawn away by a slight sideward jerk.

The above work should be done in the honey-house at a temperature of from 70 deg. to 80 deg. Fahr. To prevent wind from chilling the young brood, the frames should be carried from and to the hives in a closed box made to take two frames. In chilly weather it will be necessary to have a stove burning in the honey-house. The transference of the larvæ is rendered easier by propping up the comb on a table or bench in such a way that the light falls into the bottom of the cells, also by cutting or breaking away a portion of the walls of the cells.

Some queen-breeders transfer the lining of the cell (consisting of the skins of its previous occupants), as well as the larva contained in it, to the cup. The comb is pared down, and then the lining is detached and transferred to the cup with a pair of forceps (Atchley's method), or with a wooden tool shaped like an ordinary ¼-in. hollow-nosed punch (Prigden's method).

Building the Queen-cells.—It is important that the larvæ in the cups should be fed and cared for by bees as soon as possible. This may be done in one of the following ways:—

1. *Rearing Queens in a Queenless Colony.*—A strong colony is deprived of its queen and combs of brood,* and at least two combs of *sealed* brood, obtained from a colony which has swarmed or had its queen removed eight to ten days previously, are given instead. There must, of course, be no queen-cells on these combs. The remainder of the combs should contain plenty of new honey and pollen. After a lapse of about 24 hours the larvæ are put into cups, as already explained, and inserted between the two combs of brood. Twenty-four hours later it will be found that the cups have been transformed into queen-cells, and that each larva is floating in a quantity of freshly-supplied royal jelly. On the third day after the larvæ were given the queen-cells are examined, any small or badly formed ones that may be found are removed, and note is made of the number remaining, so that the same number of nuclei may be got ready to receive them. On the tenth day, or the morning of the eleventh day, after the larvæ were given the queen-cells will be ripe, and should be distributed to the nuclei.

2. *Rearing Queens in a Colony that is Superseding its Queen.*—Doolittle found that a colony that is superseding its failing queen, *i.e.*, rearing others to replace her while she is still in the hive without intending to swarm, will, without any preparation, accept the larvæ in the cups very readily, and will immediately supply them with an abundance of royal jelly. If there

* All combs in the queen-rearing apiary should be built from full sheets of foundation wired into the frames.

is such a colony in the apiary it should be used for rearing queens in preference to any other method. Often the colony is not strong, and in such a case after the larvæ have been in the hive for about 24 hours they should be taken out and finished in another hive by one of the other methods mentioned. The colony can, however, be strengthened by the addition of combs of brood from other hives. Should the old queen linger on, the bee-keeper can keep the superseding colony for a long time in a condition fit for starting queen-cells readily at any time by removing all accidental queen-cells that may be formed on the combs before the queens are due to emerge from them. The bees should not be allowed to feed more than about a dozen queen-larvæ at a time.

3. *Rearing Queens in a Colony Containing a Fertile Queen.*—Doolittle further found that queens will be reared from the larvæ in the cups by any colony containing an ordinary fertile queen, provided that they are placed in a part of the brood-nest from which the queen is excluded by means of a perforated metal queen-excluder. Queens can be reared by this method that are quite equal to those produced in any other way. The method has several advantages over that of employing a queenless colony, the chief of which is that honey-gathering and breeding are not seriously interfered with, whereas, in a queenless colony, both these functions are practically stopped.

The queen-rearing compartment may either be in the ordinary brood-chamber, in which case it is shut off by a close-fitting partition of queen-excluding zinc; or it may be an upper story (super) in the shape of a brood-chamber made to take standard frames, which is separated from the lower story by an ordinary queen-excluder. In either case it should contain several frames of brood, placed as near to the main brood-nest as possible, with the frame of cups between them.

The writer has succeeded in rearing good queens in the upper story of colonies that contain a fertile queen in the lower story in East Kent, from about the middle of May until about the middle of August. The period would no doubt vary a little in different localities, in accordance with the duration of the honey-flow.

After the honey-flow some difficulty is likely to be experienced in getting the larvæ in the cups accepted, the bees destroying many or all of them, although they will accept them after they have been started. The best way to overcome this difficulty is to get the queen-cells started by a colony that is superseding its queen. If, however, there is no such colony in the apiary, the queen-cells may be started by bees that have been deprived of both queen and brood in one operation, as such bees will accept the larvæ in the cups readily when they become aware of their condition. The bees are shaken off brood-combs through a large metal funnel into a well-ventilated box, to which they are confined in a dark place with one or two combs containing unsealed honey and pollen for about six hours. Larvæ are then put into cups and given to the bees, which will at once commence to feed them, and to transform the cups into queen-cells. As soon as the queen-cells are well started (about six hours later), they are transferred to the queen-rearing compartment of the colony in which they are to be finished, and the bees are returned to their hive or otherwise made use of.

This plan, however, involves a good deal of manipulation, and an easier one is to shut off the bees in the queen-rearing compartment completely from the compartment containing the fertile queen and young brood for a few hours, care being taken that all the brood combs in the queen-rearing compartment have had no worker eggs laid in them within seven or eight days, and contain no accidental queen-cells. In the case of rearing queens in upper stories, the bees in the upper story are confined over a special ventilated floor, which should be made by tacking a piece of wire-cloth of about 1-12-in. mesh over the top of an empty brood-chamber

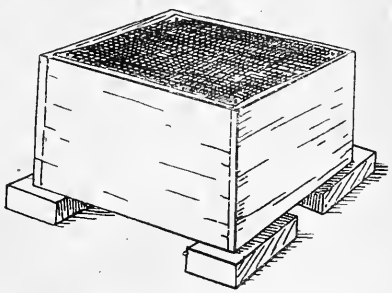


Fig. 4.—Ventilated floor for upper storey.

or lift, this being supported on four bricks placed on the ground just behind the hive (see Fig 4). The upper story should be lifted on to this floor about 11 a.m., and a gap is then made between two of the middle combs to leave room for the frame of cups and larvæ which is to be prepared and inserted later. In order to prevent the confined bees from escaping round the edge of the quilt a large board is placed on it, and a hive roof is placed diagonally on the board to shelter the bees from the rays of the sun. The frame of cups and larvæ is prepared and inserted about 4 p.m. In doing this the quilt is lifted and replaced quickly, so that as few bees as possible are allowed to escape. The upper story is returned to its hive the following morning, the earlier the better, the queen-excluder

being, of course, replaced between the upper and lower stories. If desired, the operations can all be carried out on one day, the upper story being placed on the ventilated floor at 8.30 a.m., the larvæ given at 12.30 p.m., and the upper story returned to its hive at 6 p.m.

Queen-cells at Regular Intervals.—It is desirable that a supply of ripe queen-cells should be obtainable for distribution to the nuclei at regular intervals through the season. In an apiary where a fairly large number of queens are required, batches of queen-cells may be started and finished at intervals of three and four days alternately, *i.e.*, twice a week. A special advantage to be derived from starting a batch every three or four days is that a supply of jelly for starting the larvæ can be obtained from the batch started three or four days previously. The queen-cells are examined and counted as usual on the third or fourth day after they were started. At the same time the smallest cell is removed, and the next batch is started at once from the jelly contained in it. There is usually enough jelly in one queen-cell to start a batch. Another advantage is that each operation is carried out on a certain day of the week. Troublesome calculations, and the embarrassment that results from the fact that Sunday is not a working day are thus avoided.

It will be found necessary to replenish the upper story with two combs of brood in all stages once a week. At one time these combs may be obtained from the lower story of the colony; at the next from another colony, and so on alternately. In this way the strength of the colony will generally be evenly maintained. At the time that these combs are given, accidental queen-cells may be searched for in the other combs of the upper story, and any that are found destroyed.

It will be found that a large quantity of honey (or syrup) will be constantly deposited in the outer combs of the upper story; the heaviest of these should be removed when the extra combs of brood are given.

General Directions for Rearing Queens.—Whichever method of rearing the queens is employed, it is important that the colony should be strong—very strong in the case of queens reared in upper stories—so that the larvæ may be supplied with a large quantity of royal jelly. Especially should there be plenty of young bees, as these bees make the best nurses for the larvæ. An abundant supply of royal jelly is specially important during the later stage of the queen larva's growth.

It is also important that the queen-cells should be kept at a correct temperature from the time they are started until they are distributed to the nuclei, and afterwards in the nuclei until they hatch. This can be ensured by always keeping them between combs of brood. Ventilation should not be neglected; in hot weather the jelly in upper stories will grow thick if plenty of air is not given below.

The larvæ in the cups are most readily accepted and most lavishly fed during a honey-flow, and it is then that the largest number of well-developed queens can be obtained from a colony of given strength. When there is no honey-flow the colony must be fed freely with thin syrup, and only a comparatively small number of queen-cells should be started.

A slate or card should be kept in each queen-rearing hive, on which is to be noted such necessary data as the strain of queens reared, the number of queen-cells, the date when they will be ripe, also other useful information. A permanent record of each batch raised should be kept in a book. The notes about each hive may be kept in the book instead of in the hives.

Queens used for breeding purposes should be kept in colonies of medium strength only.

ERRATA.—Page 92, column 1, line 44, instead of "an admixture of foreign blood is often valuable," read "an admixture of foreign blood is always valuable." Page 93, column 2, line 6, instead of "cups . . . should be fastened about $\frac{3}{4}$in. apart," read "cups . . . should be fastened 1in. apart."

(*To be continued.*)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

THE VOICE OF SPRING.

[5467.] "The beautiful spring shineth and smileth on everything," and at her call bee-men, roused from their lethargy, once more patronise the corner of the garden in which the hives are located. The bees, too, waken up to life and being, and at the sweet scent of her mellifluous breath again visit their fond favourites, the flowers. Yes:—

> Spring doeth all she can, I trow:
> She bringeth bright hours,
> She weaveth sweet flowers,
> She dresseth her bowers,
> For all below!

This year, on account of the last two bad

seasons, more than the usual attention should be given to the brood-nest as soon as the genial mildness attendant on spring's approach allows a temperature sufficiently high to make it safe to investigate the hive interior. I would draw special attention to pages 165-167 of the "Guide Book," where recipes are given for both candy and syrup suitable for early feeding. Candy will be in considerable requisition this season if I diagnose the state of many brood-nests aright, and I doubt not its prompt application may be the means of saving several valuable stocks from extinction. In early spring it is the only food which can be safely administered to the bees. A one or two pound cake should be quickly and gently placed over the centre of the frames, or the feed-hole in under-quilt, and all the coverings promptly and expeditiously readjusted. The whole operation should indeed be over before the bees are conscious of any interference, for then only is the operation a full success. This, however, is only a makeshift, and as soon as weather permits thick syrup should be given in a luke-warm form in a regulated feeder.

The bees' chance of obtaining even a limited supply outside as yet is scant, here at least. But at a very early date a few flowers will bloom which yield an abundant supply of pollen, and a few of them even yield a very limited quantity of honey. The willow yields both. Every season it is profuse in its production of pollen, and in very fine springs it yields even rich surplus in favourable localities. Hereabout, a small yellow composite flower, the coltsfoot—somewhat resembling a small dandelion, but bearing the flowers before the leaves appear—is the first pollen-yielding bloom, and it grows in thousands on soil rich in lime. While it is not of much use to grow garden flowers for the bees, an exception may be made in favour of three blooming in early spring as follows:—

Arabis Albida.—This Alpine arabis, or white cress, is so profuse a bloomer, bearing an umbel of small snow-white flowers in such abundance that the blossom covers the whole bed with a mass of white, and so suggesting the common name which it bears, viz., "snow-in-summer." It flowers about the early or later days of April, and right through May. Considering its diminutive size, it yields a fair quantity of honey at a time when nectar-producing plants are very rare indeed. It should be grown in quantity, and the best form is a large, oblong bed. It can be produced from seed, but, when once established, cuttings may be made to any extent from the offshoots. These should be planted in a fairly damp soil, and, if properly inserted, they rarely fail. It loves a medium rich soil. Plants should be placed a fair distance apart, as after the first season they extend considerably in every direction, and, as these growths yield the fairest, largest, and most abundant crop of bloom they should be encouraged. A large bed of arabis, with thousands of bees almost covering it, is a sight which must delight the heart of every true bee-man.

Crocus.—These are excellent plants to grow in quantity. Their culture is a very simple matter, as they succeed in almost every kind of soil, although they love best that which is light and well drained, but tolerably rich. Once established they furnish ample and unfailing means of propagation in the natural annual increase of the bulbs. I have now many thousands of all colours, multiplied naturally from a few hundreds purchased a good many years ago. They thrive best when lifted periodically, say every three or four years, after the leaves decay, and re-planted immediately, any time during October. The ground should be well dug, and if poor, enriched with fresh soil or leaf mould beforehand. No other spring flower yields so abundant a quantity of pollen, and the bee can load up on its bloom quicker, and with less labour, than on almost any flower I know.

Wallflower.—This flower is pleasing to the sight, a delight to the sense of smell, and a most bountiful source of pollen for bees in spring. It should be cultivated extensively, and a new sowing should take place every year. A three-penny or six-penny packet, thinly sown in drills on any vacant piece of ground throughout the summer, yields several hundreds of plants. These may be left until the autumn, but better and more shrubby plants are obtained when they are transplanted into nursery beds in early autumn, and then, just before winter sets in, planted out in their permanent quarters.—D. M. M., Banff.

A HOME-MADE EXTRACTOR.

HOW TO MAKE ONE.

[5468.] I have much pleasure in complying with the request of Mr. George Ive (5457, page 88) that I should give particulars, the more so as I should like to make a practical instead of denunciatory protest against advertisements of this type:—"How to cut a hole in a quilt," 2½d., etc. I must premise that my home-made extractor looks rough, but—and I wish to emphasise this as the essential point—it works all right. If any point needs elucidating I shall be pleased to make it clear.

Buy a sheet of tinned-steel 5 ft. 4 in. by 2 ft. 2 in., another 1 ft. 9 in. square, and two iron rings ¼ in. thick; one ring to be 1 ft. 7½ in. outside diameter, the other

¼ in. less. Tin would be better than the steel, but cannot be obtained in sheets large enough. I got the above from a local blacksmith.

Fold the large sheet into a cylinder shape, so that one end of cylinder fits tightly round larger iron ring. The ends will overlap a little. Fix that end with a rivet while the other end of the cylinder is being attended to. The overlapping edges must be laid quite parallel to each other so that cylinder shall be exactly same size and shape at each end. Put one or two rivets through overlapping edges. Make cylinder true and round; then solder edges inside and out. Next take the square piece of steel, and mark two concentric circles on it; the inside one 1 ft. 7½ in. diameter, outside one 1 ft. 9 in. Cut it down to outside circle, then snip little triangular pieces out of the edge all round in such a way that base of triangle is on outside edge of sheet, and apex just touches inner circle. Next, take the smaller iron ring, and beat the edge of the sheet over it, so that the latter laps over the iron ring all round. This is the most fidgetty part of the whole concern. The triangular pieces cut out should be numerous, but small. If too much is cut away the edges will not meet, while if not enough the edges will overlap. In a word, if nicely done the outside will be round, smooth, and even. This is the bottom of the cylinder. Now put it inside end of cylinder, convex side inwards. (If it fits tight all the better.) Give the joint a good hammering all round to make it fit, and then solder on the inside. In the next place, something is necessary for spindle of cage to spin on. To get over this difficulty I soldered part of a brass candlestick —mouth upwards—in centre of bottom of cylinder, but this itself would not have stood the play of the cage in revolving, besides, I thought it would not be nice to

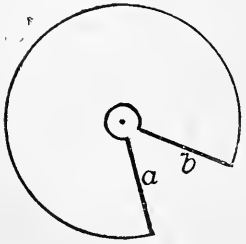


Fig.1

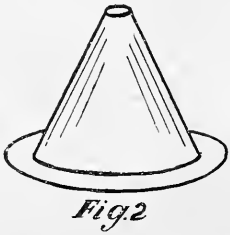


Fig.2

have honey come in contact with an old brass candlestick, so I made a tin cone like sketch, Fig. 1. To make this first cut out a piece of tin—as shown—fold edges *a* and *b* together to slightly overlap. Beat out outer edge of cone so as to form a shape as Fig. 2. The hole at the top should clasp the top of candlestick tightly, while the lower edge lies flat on bottom of cylinder. Next solder it top and bottom.

The next item is the cage of extractor. Get a square bar of iron a little over 3 ft. long, round off one end as smooth as possible, and bend the other end, as at top of Fig. 3, to shape.

Now take four flat iron bars each 1 ft. long, cut a square hole in centre of each just large enough to fit tight on to iron spindle, and turn down both ends of each 1¾ in., also make a couple of holes in each turned down end for screws. Put the spindle through the square holes, and adjust bars in pairs, one pair 6 in. from the bottom, and at right angles to each other, the other pair 1 ft. 5 in. above, and also

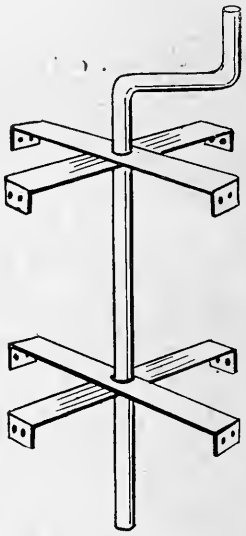


Fig.3

at right angles, adopting some means to keep them in their places. Any part which is found difficult can be made by a local blacksmith, who made square holes for me, and put a pin through spindle to keep cross-bars in places.

Next, saw off eight pieces of some hard wood, each 23 in. by 2 in. by ½ in., and cut two notches half-way through each piece ½ in. wide, and 1½ in. from each end. Then fit them together to form two squares as in Fig. 4.

Then eight pieces, each 17 in. long by 1½ in. should be fitted into outside angles of these squares, so that top of one square is 17 in. above bottom of the other. We have now a hollow cage with one of above squares at the top, and another at the bottom, held apart by the aforesaid 17 in. bars. Fig. 5 shows one of the corner of cage. If all is made to the correct size it will be found that the turned down ends of flat iron

bars, Fig. 3, just fit inside bars of wooden squares, and may now be screwed on. Next, screw on blocks for frames of comb to rest on as at *a*, *a*, Fig. 4. Now, get some wire ("No. 30 tinned" will do), and wind it

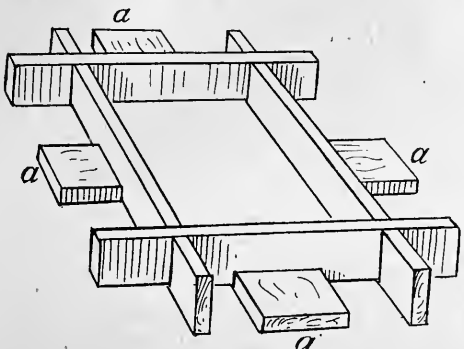


Fig. 4

round and round cage, each strand $\frac{3}{8}$ in. or less from next, and afterwards put some cross-pieces to support the horizontal wires. The spindle of cage rests in cup at bottom of cylinder, but we still want a support for

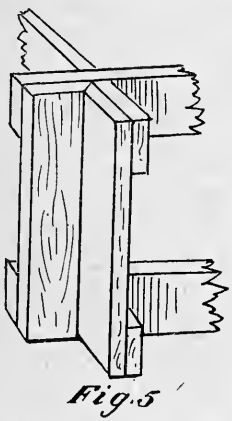


Fig. 5

it to revolve in at the top. For this, solder two pieces of stout tinned metal on outside of top of cylinder as shown in Fig. 6. Cut a piece of hard wood long enough to reach across top of cylinder. Cut two holes at each end to fit over these two supports, and also cut round hole in centre to fit over spindler, and our extractor is now complete. Its chief fault is that it needs to be geared, but I shall conquer that difficulty next winter.—S. DARLINGTON, Charing, Kent.

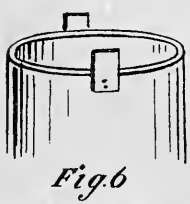


Fig. 6

NOTE.—I have forgotten to mention that the circular hole is cut in bottom of side of cylinder, and honey valve soldered in for drawing-off purposes.

A MARCH "NOTE" ON BEES.

MOVING BEES FROM HOUSE FLOOR.

[5469.] Many bee-keepers' hearts must have been gladdened this week to hear the hum of the bees once more after such a dreary winter. My bees had their first good cleansing flight of this year on the 8th, and didn't they need it! I put candy on next day, and could observe brood (without disturbing frames) in many of the hives. The food supply will need watching this spring; I noticed many were getting short. I took some bees from under a bedroom floor at Kenilworth early last month, not being able to persuade the owner to defer operating till more favourable weather, as the house was then vacant. I found a patch of brood some four inches square. The poor bees I did not know what to do with; however, I carried them home and put them on some combs having food in. Many were unavoidably chilled during the removal, but on peeping into the hive on Wednesday last I found the bees quite vigorous and with a nice patch of brood.—GEORGE FRANKLIN, Kenilworth, March 12.

QUEEN HATCHED IN MARCH

WITH LAYING QUEEN IN HIVE.

[5470.] Saturday last, the 12th inst., being fine we made an examination of some of our stocks, and had an experience which was unique so far as we are concerned, and which probably will be interesting to readers of the B.B.J. In one hive, containing three frames of brood, we discovered just emerged from her cell the enclosed queen. While upon another frame the old queen was found busily laying. We should like to know if any other bee-keeper has had experience of such abnormally early-hatched queen? We might add that the fertile queen is one we reared last year, and so far as can be seen she is in perfectly normal condition in all respects.—HERROD & STEWART, W.B.C. Apiary, Luton, Beds.

[We cannot call to mind any similar instance to the above.—EDS.]

BEE STINGS AND RHEUMATISM.

We have been asked to publish the following letter, written to a bee-keeper who is a reader of the B.B.J., and who, being unable to furnish the required information himself, asks our help in obtaining it. The letter reads as follows:—

"DEAR SIR,—I am trying to obtain some information with reference to the effects of bee stings upon rheumatism. In discussing the subject with some friends they mentioned your name, and I am now taking the liberty of writing to you on the subject, as I understand you have an extensive acquaintance with bees. I would be very

much obliged if you would kindly give me any facts which may have come to your knowledge with reference to this; more particularly whether it is true that there is a general belief amongst bee-keepers that bee stings prevent and cure rheumatism, and whether you can confirm this belief by any definite cases which have come under your own observation.—Thanking you in anticipation, yours sincerely,

"(Dr.) Frank A. Watkins."

Referring to the above, it may be said that a good number of bee-keepers would be prepared to say they have experienced more or less benefit with regard to rheumatism since keeping bees, and the subject has been dealt with in our pages many times. The following appeared in Vol. 21 bearing on the subject:—

"Some two years ago an Austrian physician advanced the remarkable theory that persons who have been stung by bees enjoy an immunity from the effects of the bee-stings for varying periods, and that, moreover, the virus of the bee-sting is an infallible remedy for acute rheumatism. The latter part of the theory, according to the *Mediterranean Naturalist*, has received most unquestionable confirmation from a custom of the country people in Malta. Bees are plentiful in the island, and bee-stings are in such repute as a cure for rheumatism that resort to this primitive method of inoculation has been a common practice in severe cases for generations, the results having been most satisfactory to the patients."—[Eds.]

Queries and Replies.

[3341.] *Transferring and Moving Bees.*—Would you advise a beginner on the following matter? This is my second season with bees, and I have the stocks placed at the bottom of a long garden in a poultry run, and I want to move them ten yards higher up to a position behind the fowl house, which latter is now at the other end of the run. Enclosed is a rough sketch of place to show what I mean. The bees are to be transferred into new frame-hives when they are strong enough. My question is whether to move now or wait until I transfer, and so I ask which do you think would be best? A bee-keeper, living near, says that if I transfer in the spring, I shall get no honey this year seeing that the bees will have brood-combs to build, and, consequently, they cannot gather surplus the same season. Is that view correct? He also tells me that the bees should be transferred at the beginning of August so that they would be comfortably settled for wintering, but I find nothing to this effect in either the "Guide Book" or the "Cottagers' Handbook," both of which I have, and being a constant reader of the B.B.J. thought I would ask your advice. I send name, etc., and sign—J. M., Dorking, March 11.

Reply.—The first consideration just now is to move the hives to the place—ten yards away—they are to occupy. This can be done, without loss of bees, in a few moves of a yard or more on each day when bees are on the wing. In the meantime let us know if the bees to be transferred are now in skeps, and if it is intended to transfer combs as well as bees to the new frame-hives. We will then be in a position to advise you.

[3342.] *"Whys and Wherefores"—About Material for Quilts, etc.*—I should be much obliged if you could find room to answer the following question in the Bee Journal. 1. Is it harmful to use American cloth quilts in the winter, and if so why? 2. Can you recommend use of celluloid or other transparent quilts for winter or other seasons, and if not, why not? 3. In wiring frames why not pass wire through holes bored in frames, and fasten off on outside instead of using nails or staples? 4. Can a nucleus formed as per "Guide Book" raise a queen from egg, and build up into a stock? If so, is the end of May too early to form nucleus? Name enclosed for reference.—First Principles, King's Norton, March 10.

Reply.—1. Our preference is for a porous-covering next to frames in winter, as allowing for ventilation without draught. At same time we know that many bee-keepers cover frame-tops with American cloth in winter, nor need anyone object to them for doing so if it answers the purpose. 2. The transparent celluloid covering is all right if fixed on a frame that allows of free passage-way for bees over tops of frames. 3. The method of wiring frames is so entirely a matter of opinion that everyone should, to use a familiar term, pay his money and take his choice. 4. No. Without going so far as to declare it impossible for a nucleus colony (if plentifully supplied with young bees) to raise a queen from an egg we may say that a nucleus to be safe must be formed as advised in "Guide Book." The end of May is a good time to form nuclei.

[3343.] *Using Honey from Suspected Hives.*—Having lost one of my stocks of bees this winter without knowing the cause of death, I find there is plenty of sealed stores in frames, and wishing to use the same for other hives, I am sending a piece of comb containing sealed brood, as I am anxious before doing so to know if it

is a case of foul-brood, or have the bees died from cold? There were only a few dead bees left in the hive, and I might also state that the stock has never done well. I send name and address for reference, and sign myself—AMATEUR, Stratford.

REPLY.—There is foul-brood in comb sent. Not a bad case, judging from sample, but the disease is there, and, in consequence, the honey must on no account be used as food for bees.

[3344.] *Bees Swarming Out in March.*—I should esteem it a great favour if you can explain the behaviour of one of my stocks of bees? Tuesday, March 8, was a very warm day, and the front of my skeps were covered with bees. I also noticed that they were endeavouring to rob one another. At about 2 p.m. when the sun was shining brightly on the front of the skep in question the bees swarmed out, and settled on a line of railings close by. They stopped there for about five minutes, and then flocked back to their hive. Is not this a very extraordinary circumstances? I have never heard of a swarm in March before. I might also add that in the morning the bees of all the skeps were busy carrying in pollen gathered from crocuses, so I think there must be a queen in the hive which has plenty of honey in store.—W. A., Oundle, March 12.

REPLY.—The swarming out has no doubt been caused by the unusual warmth through the sunshine followed by the excitement of robbing.

[3345.] *A Beginner's Queries.*—As a beginner may I trouble for a reply to the following:—1. What is your opinion of the enclosed sample of candy? 2. Is the dead bee enclosed a queen? I have good reason to believe that the bees balled their queen owing to the disturbance caused by opening the hive on March 9 to clean floor-board. I need not trouble you with the whole details and do not wish to open hive again until more settled weather comes. 3. Has time any deteriorating effect on the medicinal properties of naphthol beta solution?—T. W. L., Treharris, March 14.

REPLY.—1. Candy sent is very good. 2. Yes, and it is apparently a case of "balling" brought about as you suppose. 3. None whatever; the solution will keep any length of time if bottle is well corked.

[3346.] *Preventing Granulation in Sections.*—Would you kindly advise me through your valuable paper what is the best way to prevent granulation of honey in sections, or at least to delay it longer than would otherwise be the case? And about how long can sections be kept in good condition by the method recommended? What is the reason of some sections granulating much quicker than others? I generally put a dozen into a wooden box, lined with paper, with a piece of cardboard between each section. After the box lid is tacked on I cover with paper all round the joints outside so as to make box air-tight. Do you recommend this plan? I send name for reference, and sign —W. C. W., Sydenham, S.E.

REPLY.—1. A dry, warm place is best for storing comb-honey in. If store cupboard can be kept at a temperature of about 65 deg. Fahr. sections (other than those from mustard bloom) of honey will keep a good many months in liquid condition. We have seen a 1 lb. section the honey in which was perfectly liquid after keeping for ten years; this, however, was an exceptional case. 2. The main causes of early granulation are, first, the source from which the honey is gathered; second, the season of gathering. Some honies become solid in a couple of days after removal from the hives.

[3347.] *Drone-brood in March.*—Wednesday last, March 9, being a warm day I took the opportunity of examining my only stock of bees, which occupy a frame-hive, and I conclude they must be queenless, as I find a lot of drones and also a lot of drone-brood in combs, while there is no worker-brood. The bees cover about seven frames; what would you advise me to do? 1. Could I re-queen the stock now? It is the only one I have. 2. Do you think there is a drone-breeding queen in the hive? and if so how could I get rid of her? There is plenty of stores in the combs. Anxiously awaiting your reply. Name enclosed for reference.—BRISTOL, March 11.

REPLY.—1. The stock could be requeened if a fertile laying queen is available. 2. It is fairly certain there is a drone-laying queen in the hive, and there should not be much difficulty in finding her on the combs, and picking her off when desired.

[3348.] *Renewing Combs in Hives.*—1. Do you recommend destroying combs after being in use for some time, and renewing with sheets of foundation? I find some of the combs in my hive are black with age, or would you cut off the lower portion which is black, and leave the upper part as a guide, or remove the whole and replace with foundation? 2. After hiving a swarm in a frame-hive, fitted with full sheets, I am told they will be ready for sections in a fortnight. Is this correct? 3. In examining my hives yesterday I found one stock dead. There was plenty of honey in the combs, but the quilts were a little damp at one corner. The combs seem healthy; they were well covered. I cannot think what killed them; they were well fed, but were

not a large swarm when hived.—T. S. R., Colchester, March 10.

REPLY.—1. When combs become black with age, or in any way unfit for brood-rearing or surplus storing, they should be entirely renewed as stated. In fact, it is a good plan to have two new combs built in every hive each year to replace faulty ones whenever the latter are seen. 2. All depends on the honey income during the "fortnight." Swarms may have to be fed for a week or two after hiving if weather is adverse. 3. Probably the bees have succumbed through paucity in numbers.

Echoes from the Hives.

Newmarket, March 9.—Yesterday and today being unusually bright with a soft southern breeze the bees had a grand turnout, of which, after the late frosts and piercing east winds, they stood greatly in need. I took the opportunity of making a first cursory inspection around the apiary, and every stock was found safe but one. There the fact of a tenantless hive was explained by finding of a fine young queen crushed flat on the top-bar of a frame by the collapse of a piece of candy the size of a hen's egg. This gives a wintering loss of exactly one per cent. Considering how mild the winter taken as a whole has been the consumption of stores has proved to be less than was anticipated, and no stocks were found in imminent danger on that account. Breeding is, however, certainly more backward than for some years past; but it is better thus than to have large brood-nests early in the season, and then to experience the mortification of seeing the prosperity of stocks checked, if not destroyed, by an inclement April or May.—C. H. B.

Salperton, Glamorganshire, March 14.—Bees have had a better chance for a week now, but they were badly in need of a cleansing flight. On Tuesday, March 8, I gave a cake of candy to one lot, and they have cleared it up and need more, also other hives, as the last fortnight most of them have uncapped a quantity of frames, and I may lose them if cold continues. Sunday, March 13, a lot of bees flying, and taking in pollen of a light yellow colour, presumably from aconites or crocuses; of the former there is a quantity at half-mile. I have still one dozen of 1903 honey having retailed all produce but 22 lbs., in all between £6 and £7 worth, and being only an amateur (fourth season coming), B.K., don't you think this is good? I have taken to hive-making it being very good practice on wet days, and good employment for the mind. With all good wishes to our advisers.—C. R. H.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

C. P. (Aylesbury).—Bee Nomenclature.—No. 1 is a fairly well-marked carniolan hybrid. Nos. 2 and 3 are the common brown or native bee.

G. H. (Canterbury).—Expert's Certificate.—The particulars required may be had on application to Mr. E. H. Young, secretary, B.B.K.A., 12, Hanover Square, London.

ANDOVERIAN (Hants).—Boiled Honey as Bee Food.—The liquid would be in no way harmful to bees as spring food, either with or without the addition of N. Beta.

G. M. P. (Herefordshire).—Bee-Feeders.—The feeder (No. 29, page 34) in catalogue mentioned will be as suitable as any you could have.

E. H. P. (Gravesend).—Bee Candy.—Your sample is very good indeed.

H. C. (Pewsey, Wilts).—Sugar for Bee Food).—If both samples are guaranteed cane-sugar No. 1 (crushed lump) will do well for candy-making, and No. 2 (yellow crystals) is suitable for spring use, but not for syrup-food in winter.

W. A. C. (Preston).—Bee Candy.—Both samples are altogether too hard for bees' use. The candy should be quite soft and smooth in grain when scraped with the nail.

Suspected Combs.

NIMROD (Broughton, Hants).—There is no disease in comb sent, but, judging from appearances, the queen was unmated and a drone-breeder. With plenty of fully-developed drone-larvæ there is not a sign of worker brood.

PUZZLED (Dorset).—We find no trace of disease in comb sent; in fact, the cells contain only a few bees that have evidently died from starvation.

CAREFUL (Penn, Bucks).—We have little doubt that the stock has been badly affected with foul brood, though all trace of the diseased larvæ has dried up and disappeared. Why you should ask "if it is only chilled brood" we cannot quite make out. Why not send us a piece of comb, with fresh brood in cells if there is any? We could then give you a definite opinion.

DE PONTIBUS (Cheshire).—Nothing whatever wrong with comb. It has never been occupied with brood at all. The black substance in a few cells is only hard pollen.

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

The monthly meeting of the Council was held at 105, Jermyn-street, S.W., on Thursday, March 17, Mr. T. W. Cowan occupying the chair. There were also present Miss Gayton, Rev. W. E. Burkitt, Dr. T. S. Elliot, Colonel Walker, Messrs. W. Broughton Carr, W. P. Meadows, A. G. Pugh, W. F. Reid, E. D. Till, T. I. Weston, and the Secretary.

The minutes of the previous meeting were read and confirmed.

The following new members were elected, viz.:—Miss A. Allnutt, Long Wittenham, near Abingdon, Berks.; General Sir Stanley Edwardes, Sandhurst, Hawkhurst, Kent; Rev. T. J. Evans, Tarvin Vicarage, Chester; Buckingham Bee-keepers' Association, Honorary Secretary, Mr. E. Oetzman, Lyndhurst, Slough.

The report of the Finance Committee was presented, together with a list of payments recommended, and for which cheques were required. The report was adopted.

It was resolved to grant one silver medal and one bronze medal for competition at the Royal Lancashire Show, at Southport, in July next.

The Secretary reported that the judges nominated to officiate at the forthcoming "Royal" Show, had accepted office, and their names had been sent in to the R.A.S.E.

The other business transacted was of a purely formal nature relating to arrangements for the general meeting and conversazione of members held later in the day.

The next meeting of the Council is fixed for Wednesday, April 20.

ANNUAL GENERAL MEETING.

The annual general meeeting was held at 4 p.m. Mr. T. W. Cowan presided, and among those present were:—General Sir Stanley Edwards, Colonel Walker, Revs. W. E. Burkitt and R. M. Lamb, Dr. Elliot, Mrs. Bennett, Mrs. Ford, Miss Gayton, Miss Hall, Miss Dunham-Massey, Messrs. A. Sanyer Atkin, L. Belsham, C. H. Bennett, T. Bevan, W. Broughton Carr, R. T. Duncan, Jesse Garratt, James Lee, Robert Lee, L. Illingworth, A. G. Pugh, W. P. Meadows, W. F. Reid, Osborne Smith, G. H. Sander, F. W. L. Sladen, E. H. Taylor, E. D. Till, Ernest Walker, T. I. Weston, J. Willard, and the Secretary.

After the minutes of the last annual general meeting had been read and confirmed, the Chairman speaking with regard to item No. 2 on the agenda: "To receive the report and balance-sheet issued for the year 1903," said the Council quite expected that the President (the Baroness Burdett-Coutts) would have taken the chair, in fact, she had sent a message to the effect that most probably she would be present; but at the Council meeting an intimation came from Mr. Willard that her ladyship felt scarcely well enough to come out. He (the Chairman) was sure they would all regret with him the Baroness' absence, and join heartily in a vote of thanks to the noble lady. With regard to the report it had already been presented to everyone in the meeting, and there was very little, if anything, that need be said about it. As to the finances there was now as always the same difficulty, namely, not enough money to do all the Council would like to do. There ought to be a secured income from a larger number of members. It would be noted with pleasure that the apiary at Swanley now contained no foul-brood. When it was first started foul-brood was very prevalent in the district, but by dint of care and attention the disease had been extirpated. The experiments with the Caucasian bees had not turned out successful. Concerning the shows, the Council had made a proposal in the interests of fair exhibiting, of which they were all well aware and he thought this ought to have a trial. He would also have liked the different societies to take up the Insurance scheme with more heartiness. Some had done so, enthusiastically, while a few county secretaries would not undertake the trifling work necessary on behalf of their members. Statistics, too, were an important matter, and the Association ought to be able to get them through local secretaries. It had been tried several times unsuccessfully, but now that the B.B.K.A. was about to get the county associations more fully represented on its Council, the difficulty would no doubt be surmounted. There was an idea existing that there ought to be more county blood in the parent Association, and he believed an endeavour would be made to give effect to that view. He moved that the report and balance-sheet be accepted and adopted. Mr. Meadows seconded the motion, which was carried unanimously.

Mr. Bevan proposed a vote of thanks to the retiring Council and officers, and after being seconded by Mr. A. G. Pugh, the resolution was carried unanimously.

Mr. Till moved a vote of thanks to the Council of the R.S.P.C.A. for the gratuitous use of their Board-room for committee and other meetings. This assistance rendered to the B.B.K.A. went back many more years than he could remember, and the Society had proved itself an old friend and a real and true friend to their cause. Mr. Carr heartily seconded the motion, which was carried *nem. con.*

Mr. T. I. Weston (in the absence of Mr. J. B. Lamb), pursuant to notice, then moved that "Rules 7 and 8 be amended to read as follows:—

"'Rule 7.—The management of the Association shall be conducted by a Council, consisting of twenty-one members, elected for a period of three years, and of the following *ex officio* members: The president, vice-presidents, treasurer, and representatives of affiliated associations, appointed under Rule 3 of the Conditions of Affiliation. Three members of the Council shall form a quorum, and the Chairman shall have a casting vote.'

"'Rule 8.—One-third of the Council shall retire annually, but they shall be eligible for re-election if they have attended a Council meeting during the year. When there are not sufficient new candidates to fill all vacancies, retiring members who have not attended a meeting may be proposed for re-election. Candidates other than retiring members must be nominated by two members of the Association, upon a printed nomination paper to be obtained from the Secretary, and the election shall be by show of hands at the annual general meeting. The names of those to be proposed for election shall be printed in the draft report, which is sent to members of the Association before the annual general meeting. Any vacancy which may occur during the year shall be filled by the Council, and such new member shall retire at the annual general meeting at which his predecessor would have retired.'"

In moving the above Mr. Weston said the time had come round again to re-print the rules, the old ones after the lapse of years being exhausted. The opportunity should therefore be taken to correct and bring them up-to-date. He thought that instead of the whole of the Council retiring at the end of the year, it would be better if that body were elected for three years, and some members retired annually in accordance with Rule 8. There was considerable difficulty in finding gentlemen who lived within reasonable distance of London, who would undertake to work on the Council and attend all the monthly and other meetings; and as it was highly important to have a sufficient number to discuss all matters of business that arose, he thought it was desirable when once those members' services were secured to retain them as long as possible. In view of this it would be advantageous to hear the views of members regarding the proposed amendments.

Mr. Bennett seconded the proposition.

Mr. Pugh thought that the number of *ex officio* members which would be included by the amendment was far too large, seeing that some county associations had ten or twelve vice-presidents, and it was unreasonable that all these should be included on the Council. That would put enormous power in the hands of county associations.

A debate followed, in which the Chairman, Mr. Meadows, Mr. Pugh, and Mr. Garratt took part.

The Chairman said the Council consisted of twenty-one members. According to the rules the president, vice-presidents, and treasurer were *ex officio* members of the Council. In addition to that they had the county representatives, one of whom from each county (if a member of the B.B.K.A.) was *ex officio* a member of the Council. Twenty-eight county associations were each entitled to send two representatives, so that twenty-eight persons were eligible to sit on the Council. At the last conversazione that was not understood, and should be made perfectly clear. With regard to election for three years, personally he had a great objection to that, but would be glad to hear what the members thought about it. Persons who never came might be elected on the Council, while others willing to serve and work might be forthcoming, but could not be utilised because of this rule. He was, therefore, strongly in favour of annual election.

Mr. Pugh moved that the words "vice-presidents" be deleted. It would be useless trouble and expenditure for the secretary to write to 280 people notifying these meetings, and if they did come in order to vote on any crucial question they could swamp the Council altogether.

Mr. Reid pointed out that the words "of the B.B.K.A." were intended to be inserted after the word "treasurer" in the proposed amendment to Rule 7.

Mr. Pugh then withdrew his motion, and the proposal that the words named should be added was agreed to unanimously.

Colonel Walker moved a further amendment to projected Rule 7, namely, that after the words "appointed under Rule 3 of the Conditions of Affiliation" should follow "and No. 8 of the Privileges of Affiliation."

Mr. Pugh seconded, and the suggested alteration was carried unanimously.

After a few words from the Chairman on the same point, Mr. Reid said he thought the Association ought to continue its management on the most popular lines, and therefore he proposed that the words "three years" be deleted and "twelve months" substituted. This was seconded; and the motion was unanimously adopted.

Mr. Weston then moved that Rule 7, with amendments, which now ran thus, be put to the meeting:—

"Rule 7.—The management of the Association shall be conducted by a Council, consisting of twenty-one members, elected for a period of twelve months, and the following *ex officio* members:—The president, vice-presidents, and treasurer of the B.B.K.A., and representatives of affiliated associations appointed under Rule 3 of the Conditions of Affiliation, and No. 8 of the Privileges of Affiliation. Three members of the Council shall form a quorum, and the chairman shall have a casting vote."

Mr. Carr seconded, and the resolution as amended was carried *nem. con.*

A general conversation ensued regarding Rule 8 as formulated by Mr. Weston, and upon the motion of Mr. Pugh, seconded by Mr. Garratt, it was unanimously adopted in the following form:—

"Rule 8.—The Council shall retire annually, but they shall be eligible for re-election. Candidates other than the retiring members must be nominated by two members of the association upon a printed nomination paper to be obtained from the secretary, and the election shall be by show of hands at the annual general meeting. The names of those to be proposed for election shall be printed in the notice of meeting, which is sent to members of the association before the annual general meeting. Any vacancy which may occur during the year shall be filled by the Council."

Colonel Walker said the object of the two amendments of rules which stood in his name on the agenda was to bring closer together the affiliated associations and the parent body, and that the former might have every opportunity of exerting full influence on the proceedings of the Council of the Central Association. Nos. 6 and 7 on the agenda should be taken together, and if passed it would follow that county branches would have three members to represent them. That would give a better chance for each county to be represented. There would consequently be 84 possible delegates, but as such a force, if granted voting power, would be unduly preponderant, he had put in a condition that each county should have only one vote. He then formally moved:—

6. "That Condition of Affiliation No. 3 be amended to read as follows:—'Each affiliated association shall hold an annual general meeting, and elect two of its members (not necessarily residing within the county or district) to attend the quarterly conferences of the representatives, one of whom (approved by the Central Society), being a member of the British Bee-keepers' Association, shall be, by virtue of such election, a representative member of the Council, with full power of voting at any of its meetings.'"

7. "That Privilege of Affiliation No. 8 shall read as follows:—'Honorary secretaries of county affiliated associations are *ex officio* representative members of the Council of the British Bee-keepers' Association, with full power of voting; provided that, with reference to Condition No. 3, only one representative of any affiliated association shall vote on any one motion.'"

Mr. Meadows took a little exception to Colonel Walker's proposals. He objected to "not necessarily residing within the county." He also thought two representatives quite sufficient, except perhaps in the case of large county associations. The secretary, whether a member of the B.B.K.A. or not, ought to be one, and there should be one other.

Colonel Walker felt it important that the county secretary should be a member of the B.B.K.A.

The Chairman said that some of the branches could not always afford to send a representative, but might have friends living in or near London who could attend on their behalf. The object was to accommodate the associations as much as possible.

Mr. Meadows said that representatives living in or near London could not know what was required by a county 100 miles away.

Mr. Weston asked why, for instance, a Leicester man living in London should not represent his native county.

Messrs. Carr, Bevan, Pugh, Walker, and the Chairman argued in favour of the retention of the words.

Mr. Pugh said some of the associations paid representatives a portion of their expenses in coming to London. These bodies elected two delegates, and invariably one of them was the secretary. It ought to be made very clear as to whether one should not always be the secretary, and also with regard to his expenses.

Mr. Reid supported the payment of secretarial expenses, and he knew that the B.B.K.A. had no funds to meet any such cost. Every facility should be given for secretaries to be represented. This view was also endorsed by Mr. Bevan.

Messrs. Pugh, Carr, the Chairman, and Mr. Meadows continued the discussion.

Mr. Pugh seconded the resolutions, which, after amendment, were finally submitted in the following form, and carried without a dissentient:—

"No. 3.—Each affiliated association shall hold an annual general meeting, and elect

two of its members (not necessarily residing within the county or district) to attend the conferences of the representatives, one of whom (approved by the Central Society), being a member of the British Bee-keepers' Association, shall be, by virtue of such election, a representative member of the Council, with full power of voting at any of its meetings."

"No. 8.—Subject to the provisions of Rule 4, honorary secretaries of county affiliated associations, who are also subscribers to the British Bee-keepers' Association, are *ex officio* representative members of the Council of the British Bee-keepers' Association, with full power of voting, provided that with reference to Condition No. 3 only one representative of any affiliated association shall vote on any one motion."

Dr. Elliott had great pleasure in proposing that the president, vice-president, honorary members and corresponding members, treasurer, auditor, and analyst be re-elected for the year 1904, in accordance with Rules 5 and 9. He said the Association would have great difficulty in finding any president who would take so much interest in the Society as the Baroness Burdett-Coutts did, both financially and otherwise. They were also very grateful to the other gentlemen for their services.

Mr. Reid gladly seconded the motion.

The Chairman added a word of thanks to the Baroness for all she had done on behalf of the Association. He knew she much regretted, as they did, her enforced absence from that meeting, and that her hearty sympathy and assistance were always devoted to the cause. The resolution was carried by acclamation.

The Chairman announced that Mr. Thomas Bevan, of Marylebone, had been nominated to a seat on the Council by Mr. Carr, seconded by Mr. Weston, and it was now for the meeting to select its Council members. Mr. C. N. White notified his wish to retire through inability to attend meetings, while business abroad still prevented Mr. Otto Puck from attending, and his resignation was tendered. There was also a vacancy owing to the recent lamented death of Mr. H. G. Morris. The vacancies thus created on the Council were eventually filled by the election of General Sir Stanley Edwards and Mr. Thomas Bevan. Mr. Carr voiced the feeling of the meeting in expressing its sincere regret at the retirement from the vice-chair of Mr. Weston, while at the same time he hoped that that gentleman would still render help to the cause by remaining on the Council; to which Mr. Weston intimated assent.

Mr. Pugh moved, and Mr. Meadows seconded, that the nineteen members of the retiring Council be re-elected *en bloc*.

The resolution was carried unanimously.

Upon the announcement by the Chairman that the business of the annual meeting was now concluded, Colonel Walker stated that he would like the assembly to put on record their hearty appreciation of the excellent services rendered to bee-keeping and bee-keepers by their vice-chairman, Mr. Thomas I. Weston, who was now, unfortunately for the cause, about to retire.

Mr. Reid bore testimony to the devotion of Mr. Weston to apiculture and the interests of the B.B.K.A. Complaints had been made about some members who did not attend meetings. Mr. Weston rarely failed, and when absent he was working for their objects elsewhere.

Mr. Weston, who on rising was very cordially received, said whatever work he had done was a labour of love entirely. He had endeavoured to help the Association in the best way he could, and was only relinquishing his post because the distance of his residence from London now would prevent his giving that attention to the interests of the Association which they ought to receive from anyone holding the position of vice-chairman. Anything he could still do he certainly would to promote the objects of the Association, and he thanked the company from the bottom of his heart for their kind appreciation of his services.

A vote of thanks to the Chairman concluded the business.

*** *Report of Conversazione which followed will appear in next issue, as will also continuation of Mr. Sladen's paper on "Queen Rearing."*

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[5471.] *Owner's Risk Rates.*—Will Mr. Patchett (5455, page 87) kindly state if his agreement with the G.N.R. also covers exhibits when going and coming on other railway companies' lines beyond the limit of the G.N.R.?

Your correspondent "Perfection" (who writes on page 79) when reliquefying honey should place the tin of granulated honey into a larger-sized vessel and then fill the outer one with water to the level of the honey in the tin. Then apply a gentle heat and as soon as the honey begins to melt

stir it with a clean stick, but if not required in liquid form it can be run at once into smaller jars or tins, as soon as it can be got to flow into the latter, when it will soon recrystallise. But if it is required for use in liquid form the job must be done at the lowest possible temperature, thus retaining the aroma and flavour of the honey —if overheated (or "cooked") the honey is practically spoilt.

The Opening Season.—Winter is over, and we enter spring to-day (21st), at least, so the almanacs inform us. The bees also are again busy in quest of food—the arabis and crocus are alive with bees as I write, as are also the skeps containing artificial pollen sprinkled on some fine wood shavings. These are thronged with bees, who return home dusty as millers and loaded with the contents of the skeps—equal proportions of pea-flour and white-flour mixed. Then the drinking or watering places are brown with bees, and the tea leaves require saturating two or three times every day when fine and warm. These outside evidences point to progress and growth within the hives, and also should act as reminders that the colonies are increasing in population, and that with increased numbers the wants grow also, therefore, we must see to it that they lack nothing in the way of food. If weather is cold give a further supply of soft candy, or if the weather is warm syrup may be given in the evening for preference. If you wish to succeed "keep them warm." Extra wraps may also be given with advantage, and entrances reduced to an inch, and when moisture shows itself at the entrances with a few bees fanning towards the evening those hives may be considered progressing, and likely to make records later on in the season. Another little item to be remembered is that this is the seed-time of the year. Wall-flower seed should be sown, and also limnanthes, and other honey and pollen-producing plants. A good breadth of flowers near the hive is of great value early in the season in starting breeding. Then as the season advances let us endeavour to advance also. Every week the B.B.J. comes to hand with something interesting, if not new, and each season some new things are recorded in its pages. These pointers are all good in their way; the hints given by some of us time after time are intended as helps to the new readers, and to the mature bee-keepers. We ought often to apologise for taking up space by repetition, but unless our endeavours to help the new recruits are recorded I fear our circulation would not grow freely. To the older, experienced hands in the craft, we have no wish to dictate, we would rather they followed their experiences and relied on their own judgment, perhaps, by which they have progressed or developed a successful career beyond our hopes or aspirations.—W. Woodley, Beedon, Newbury.

SHOWS AND SHOWING.

ARRANGING SCHEDULES.

[5472.] As discussion has been invited on this subject, allow me to try to express a few ideas which have occurred to me on reading the late correspondence. And, first, I would thank Mr. T. I. Weston very much for his efforts to raise this matter out of the present narrow and somewhat low level, and also for his statistics relating to bee and honey shows. I cannot, however, see my way to support his proposed remedy—viz., "to buy up the first-prize honeys."—because it appears somewhat impracticable. For one thing, it would be difficult to estimate the value of a perfectly finished set of sections. They are a *rara avis*, mere curiosities, and, therefore, cannot be regarded as a standard of anything—not even of the limited area of the show-bench, as any one may observe from the pathetic lamentations of Messrs. Woodley and Loveday. Of course, to me their sad wail was an interesting revelation. If, then, an extra good set of sections may be looked upon as something unique, how can we tell their value? Two or three years ago a gentleman who secured such netted, I understood, by means of them eight guineas in prize-money in one week—perhaps it was in one month; even then it was splendid. I remember seeing those of Mr. Weatherhogg at Sheffield Show last year, and though I could not give him the whole credit for their finish, I felt they should bring him a handsome return. Had I been asked to price them, I would have said, "I give it up." I think their worth would have been nearer 15s. each than 15s. the dozen early in the show season.

For my part, I would not grudge a single prize to any one who has honestly gained it, however many he may have previously won. I should, indeed, like to hear of bee-keepers locating apiaries in two or three districts, and competing at Park Royal in all for which they have properly qualified. Their energy and skill would deserve not only every prize they fairly carried off, but also our admiration. The outcry against prize-hunters is simply ridiculous, as if they did not abound in, and give vitality to, every rank of life! Take away all the prize-hunters from our public schools, from the professions and commerce, from the arts and sciences, and what is left?—an uninteresting mass of flat and flabby humanity.

Still, I am ready to consider any scheme of reform which will remove abuses, or any plan which will attract more exhibitors, and also make it more difficult for a few to carry off most of the prizes. There seems to be

a good deal in the suggestion that in the open classes 12 sections or bottles should be reduced to six. It would give a better chance to those who own but a few stocks. And if there were four or five somewhat smaller prizes, instead of two or three, it would, no doubt, tend to draw many more entries. Again, a lower entry-fee should increase still more the number of exhibitors. Further, I think we are on the right tack when we work on the principle that exhibits represent, or are samples of, something commercially solid behind. It would be well, therefore, to cut down, or do away with, classes where this principle is wanting, and to encourage others where it can be developed.

Let me, for instance, apply this principle to the prize-list of this year's Royal Show in last week's issue, wherein we see that more than £50 is offered for competition. It is with reluctance that I criticise so noble an effort made to invite a representative display of British honey. But the Royal can rarely be a great success. There is an impassable barrier in the way. You know what I mean. The reports monotonously reiterate year after year excuses for mediocrity, early date of show, late season, several absentees, considering all things a fairly good show of honey was made. The schedule reminds me of the fable of "The Fox and the Crane," for what do the exhibits at the Royal generally represent?—The produce of Southern counties, and not their harvest, but only the first-fruits. And, here let me ask, is most of the £50 subscribed especially for the Royal? If so, I have nothing more to add. But if a large portion comes from the general fund of the B.B.K.A., then, I ask, is it fair for them to give prizes for which only a part of the Kingdom can compete? Some one may point to the words that honey may be of any year. I ask again, is it wise to encourage the keeping of honey from year to year? It may be said, only a few best samples need be kept. In that case, as the samples represent no stock, they are of little or no value, and for such curiosities an entry of two or three jars or sections, and smaller prizes should suffice. Supposing, then, according to the above principle, £30 were offered to the Royal, there would be £20 left to improve the prize-list of the Confectioneries, Groceries, and Dairy Show. In the two former better prizes could be offered for heather honey, but it would be important to appoint a judge who knew true ling honey from any mixture, however good.

In the Confectioneries and Groceries I would propose two classes (twelve 1lb. sections and twelve 1lb. jars) which represented some stock, as well as a museum or fancy class of three or six sections and jars, to be given in lieu of entry-fees, so that the smaller bee-keepers need not be much out of pocket for carriage, etc.

But the Dairy (the last great show) should be the grand climax of the season. It should have prize classes (one dozen sections and jars respectively) in which exhibits which have won previously would be welcomed, though others would not be excluded. To make this a success the B.B.K.A. should arrange with its affiliated associations to mark their winning exhibits with two words (prize and place of show), and numbered labels, gummed at the edges, would be forwarded to those who entered at the Dairy to cover the marked exhibits. If four good prizes were given in both these classes, successful bee-men might be inclined to keep in hand their finest produce, or be more careful to whom they sold it.

But there should also be two other classes (six sections and six jars) called "commercial," from which all exhibits which have won at county or London shows should be excluded—to represent similar honey on hand by the hundredweight or the gross (six medium prizes in each class).

By comparing the exhibits in these classes with those of the prize classes, we could see how much they were inferior in quality, etc. Any person could enter in one or all classes, the condition being that the exhibits in the commercial classes have not previously won prizes in any important show, and represent a definite quantity of honey offered for sale at a stated price, and not offered elsewhere before the close of the Dairy Show.—RICHARD M. LAMB, Burton Pidsea, Yorks.

A HOME-MADE EXTRACTOR.

[5473.] Your correspondent, S. Darlington, who sends particulars about making an extractor says (5468, page 105): "If any point needs elucidating I shall be pleased to make it clear." It occurs to me that any person who tries to make such a machine will need fuller information on several points. I would, therefore, like to ask (not for my own information, as I possess a 4-frame reversible Cowan):—1. In the absence of a brass candlestick for the spindle to work in, how should a proper bearing be made? 2. What should the size of the cone be that hugs the candlestick? 3. How is solder made to adhere to brass? 4. What is the exact size of the base of the triangular pieces cut out of the edge of the bottom; and how far apart should each cut be? 5. Why should two holes be cut at each end of the top cross-bar, when there is but one piece of metal at each side to go through the same? 6. How can the cage, which will have a diameter

of at least 30 in., if made according to measurements given, be got into the cylinder, which has a diameter of only 19½ in.? I presume there is a mistake in sizes given. 7. How much of the machine was really home-made, and how much by the local blacksmith? The latter question is important as, if not only the greater portion of the materials but also most of the labour has to be provided by others at a price, it is misleading to call it home-made. Home-designed it may be, rough it confessedly is by your correspondent's admission; but efficient it can hardly be for any honey that is much thicker than water. The centrifugal force of an ungeared extractor, in which the combs are within 6 in. of spindle, must be very feeble, and quite insufficient to extract thick honey such as one has at times to deal with. I have occasionally had difficulty even with a geared machine of 27 in. diameter, in getting honey to leave the comb. I should also like to point out that many combs worked on the wide end principle are more than 2 in. thick when finished, and, therefore, would not go into your correspondent's machine at all, unless cut down very considerably in uncapping, as he only allows a space of 1½ in. for the frames. I can quite believe that a chief fault is that it needs to be geared; but I fear that when that difficulty is conquered next winter, it will but develop at least two more; viz., the weakness of the top-bar arrangements with its square spindle in a round hole, literally; and the instability of the brass candlestick, which carries all the weight of the cage and its contents. I enclose my card.—PRO BONO PUBLICO, March 19.

BEE STINGS AND RHEUMATISM.

[5474.] Referring to the letter on this subject in last week's JOURNAL it may interest the sender and others to hear of two cases that have come under my own observation. One is that of a friend who at times suffers from gout. When an attack comes on he goes to his hives and applies a few bees to the part affected. This he has done for years, and he assures me that he never fails to get relief from it. The other case was brought to my notice at a Warwickshire Union, where the matron keeps bees. In the infirmary there was a poor fellow who at times was perfectly helpless from chronic rheumatism. On one of his better days when able to crawl into the garden he got near the matron's hives, and the bees being disturbed the man got a number of stings. A few days afterwards he was like a new man and able to get about with greater freedom than he had done for years, and he admitted himself that it had done him good. In time, of course, he relapsed into his former condition.—GEORGE FRANKLIN, Kenilworth, March 21.

PAINTING HIVES AND OUTHOUSES.

[5475.] I enclose cutting from the *Daily Mail*. This might be a good thing for the fraternity to know, so I send it on for insertion, if advisable.—D. GALBRAITH, London, E.C.

"A use to which skim milk, sour milk, buttermilk, or even whole sweet milk is not often put is paint-making; yet it makes possibly one of the most enduring, respectable, and inexpensive paints for barns and outbuildings, says the 'World's Work.'

"It costs little more than whitewash, provided no great value is attached to the milk, and it is a question whether for all kinds of rough work it does not serve all the purposes and more of the ready-mixed paint, or even prime lead and paint mixed in the best linseed oil. It is made as follows, and no more should be mixed than is to be used that day: Stir into a gallon of milk about three pounds of Portland cement, and add sufficient Venetian red-paint powder (costing 1½d. per pound) to impart a good colour. Any other coloured paint powder may be as well used. The milk will hold the paint in suspension, but the cement, being very heavy, will sink to the bottom, so that it becomes necessary to keep the mixture well stirred with a paddle. This feature of the stirring is the only drawback to the paint, and as its efficiency depends upon administering a good coating of cement, it is not safe to leave its application to untrustworthy or careless help. Six hours after painting, this paint will be as immovable and unaffected by water as month-old oil paint.

"In buildings twenty years old painted in this manner the wood was well preserved. The writer's experience dates back nine years, when he painted a small barn with this mixture, and the wood to-day shows no sign whatever of decay or dry-rot. The effect of such a coating seems to be to petrify the surface of the wood. Whole milk is better than buttermilk or skim milk, as it contains more oil, and this is the constituent which sets the cement."

Obituary.

MR. H. G. MORRIS.

It is with sincere sorrow that we have to announce the death of our old friend and colleague, Mr. H. G. Morris, in his 66th year. We know our regret will be shared by all who had the privilege of his acquaintance, and especially by those with whom he has been associated for so many

years on the councils of the British and of the Kent and Sussex Associations. The sad event occurred on the 12th inst. at his residence, Eliot Park, Lewisham, S.E., and the interment took place at Nunhead Cemetery, on Thursday last. Although in manner Mr. Morris might be considered undemonstrative and retiring, a warm heart beat underneath this exterior. He was of a singularly generous disposition, ever ready to render financial assistance in helping on the cause of bee-keeping, and forward to respond liberally, when appealed to for aid in cases of genuine need, but always desiring to "do good by stealth." Some time back Mr. Morris suffered from a slight paralytic seizure, but subsequently made rapid progress towards regaining health, and his friends were hopeful that recovery would be complete, but in this hope, alas, we were doomed to disappointment. The recent seizure was doubtless a premonitory symptom of the sad event that we, along with his sorrowing family and friends, have now to deplore.

REVIEWS.

Durch die Welt des Imkers. Betriebsweisen lohnender Bienenzucht. By Max Kuchenmüller; published by C. Schmidt, Leipzig. Price, six marks (6s.).

This work is quite different from the ordinary books on bee-keeping, and is the experience of twenty-six of the leading bee-keepers of Northern, Central, and Southern Germany, as well as German Switzerland. Each of these, in a separate chapter, describes his methods of bee-keeping, from the Luneburg heath bee-keeper, who still adheres to straw skeps, to the one who works on the most advanced movable comb system. The illustrations of the different bee-keepers' apiaries, very much like those appearing in the B.B.J., add considerable interest to the work. It is astonishing to find how differently bee-keeping is carried on in the north from the south, in mountains and valleys, and how one bee-keeper succeeds with a method which another one disapproves of. We find here old and young bee-keepers, masters of various methods, giving in the thirty chapters this book contains their experience, and in the 342 pages we find every department of practical work only in the apiary dealt with. As one of the contributors says: "The work is written from practical experience, and is intended for practical purposes, so that one may learn from different men and places that bee-keeping is not only good for mind and body, but also for the purse."

Pastor Strauli, who advocates, and himself practises, English methods, contributes a very interesting chapter on American methods of queen rearing, and R. Sprodhoff treats specially of comb foundation in another. J. Dennler describes how bee-keeping is carried on in Alsace and Lorraine, and Brother A. Weber gives us an insight into bee-keeping in a monastery in Vorarlberg, Austria. The editor, Max Kuchenmüller, completes this original work with a couple of chapters, one on the methods he employs at his apiary in Constance, which are similar to our own, and the other on simple ways of rearing queens and preserving them. The book is certainly unique, and shows how much of the success in apiculture depends on the ability of the bee-keeper. Many of the chapters have also the portraits of the authors, so that altogether the book is well illustrated, and cannot fail to interest those acquainted with the German language.

We have received from the author, Abbé Delaigues, *Petit Cours d'Apiculture*, a useful elementary booklet on bees and bee-keeping. It consists of five short but concise chapters contained in fourteen pages, and twelve more are occupied with closely-printed directions for work in the apiary during each month of the year. Price 75 centimes, or 7½d.

Also *Le Miel*, by the same author. This consists of ninety-eight pages, thirty-nine of which are devoted to the production of honey and the remainder contain recipes for its use in various ways, as well as the manufacture of hydromel and vinegar. This little book will be interesting and profitable to those who wish to find fresh uses for honey. Price 1 fr. 50 centimes (1s. 3d. in English money).

We also acknowledge having received three lectures delivered by the Abbé Delaigues at the Universal Exposition in Brussels before the Pomological Congress of France, and to the Central Bee-keepers' Association at Chateauroux. Price 50 centimes each. Any of these works may be procured from the author, whose address is, Sainte Fauste, par Neuvy-Pailloux (Indre), France.

Queries and Replies.

[3349.] *Bees in Hive-roof.*—Many thanks for your reply to my query (3340, page 99), in B.B.J. of March 10. I am sorry to say that there is no experienced bee-man to whom I could apply in this district, and I would, therefore, be obliged if you would send me instructions how to proceed, and I will try the job myself. Thanking you in anticipation, I sign as before.—A. B. C., Strachur, N.B.

REPLY.—The difficult points lies in the possibility of the queen being still in the

hive-roof, and the brood-nest established there; because if that is so the combs containing brood will need to be cut away from the roof, and tied into frames for transferring to body-box below. To decide this question, therefore, the roof must first be prised off and laid aside on a board (to confine the bees on combs), while the frames of hive-body are lifted out and examined for brood. If queen and brood is seen below replace frames, and cover down with quilts. Then examine hive-roof, and after smoking the bees to quiet them turn the edge of roof uppermost, and lay the edge against flight-board of the hive, and by gently knocking on the edge the bees, if properly subdued, will leave roof and run up into their own brood-chamber as they do when being driven from a skep. If you can clear the hive-roof of bees by getting them into their hive the combs in roof may be cut out, or by putting a sheet of queen excluder on top of frames to keep the queen below, the quilts may be placed over excluder and bees allowed to pass into brood-chamber through the feed-hole in quilt. If each and every item of the above operation needs explaining in full detail, with all the precautions a beginner will need to fully understand it, it would occupy too much space, hence our desire for you to get help from an experienced bee-keeper.

[3350.] *Making the "W.B.C." Hive.*—I see I made the same mistake as your correspondent, "E. P. Anxious, Gravesend" (3336, p. 98), did according to his query in the B.B.J. of March 10 concerning the two strips of wood mentioned in the making of the "'W.B.C." hive. I therefore enclose two drawings of the brood-box as I have made it, and you will see No. 1 is a plan looking at the top on to frames, and No. 2 is a section through the sides. Owing to lack of space I have only drawn two frames, but, of course, the same would apply to any number. You will see it is full size, and I should be glad if you would answer my query as to it being correct. I also see in the hive in question a hole bored in the front of roof. I have understood this to be only intended for ventilation, and I have, therefore, covered the holes inside with perforated zinc. Therefore, will you please say: 1. Are my drawings correct, and 2, am I right about the holes in roof, or should they be made so as to act as bee-escapes in case bees get into the outer case during manipulations? I must not forget to thank you for the answer to my several questions in the B.B.J. of March 3 (Query No. 3334). I fetched the distant hive home last Monday, and they seem to be an extremely fine stock. I have them inside the new hive now, and I wish to put them over the brood-box as soon as possible. Therefore, if you can see your way clear to answer my questions in next week's issue I shall be very gratified.—F. H. H., Leicester, March 19.

Reply.—1. We are much obliged for sketches (drawn to full size) sent as affording us the opportunity of preventing others from making the same mistake as yourself with regard to the strips of wood mentioned in "Practical Note-Book." Referring to page 57 of book describing the body-box, the third line mentions "two strips of *thin* wood, $\frac{3}{8}$ in. *wide*, and $16\frac{1}{2}$ in. long." (We have italicised the words to emphasise our point.) But in your drawing the strips of thin wood are $\frac{3}{8}$ in. *square*, thus making the distance between face of comb and hive side well on for $\frac{3}{4}$ in. This is altogether too much, and would, no doubt, cause trouble. We have not defined the exact thickness of the thin wood for strips, but it is just a shade over 3-16ths in. thick, and, as stated, $\frac{3}{8}$ in. wide. 2. The holes in roof may be fitted with metal cones as bee-escapes, or be covered with perforated zinc, and only used as ventilators according to the bee-keeper's preference.

[3351.] *Tortoiseshell Queens.*—I send you herewith an advertisement cut from last Friday's *Exchange and Mart*, which as you see mentions tortoiseshell queens for sale. Are there queen bees so named, or is it a mistake as I have not heard of them before?—A. C. Tew, Maldon, March 19.

Reply.—To make your question plain it is necessary to print the advertisement in question, which reads thus:—"Handsome healthy young Persian queens, black and tortoiseshell. Offers. (Essex.)" As the announcement appears in the columns devoted to apiarian matters the inference is that queen bees are meant; otherwise we should suppose that "Queens" should read "Cats," and that the advertisement had by some oversight got into the wrong column.

[3352.] *Doubling and Storifying.*—There is a chapter in Cowan's "Guide Book" (page 58) on doubling and storifying, and the directions given for this operation are not quite clear to me; and so I ask: 1. When the brood-combs are taken from one strong stock, and placed on another of similar strength, are frames of foundation to be added to the combs of brood, so as to make the right number up, say ten or twelve, as the case may be? The article says, "Thus a double set of combs is given," but does not say how you obtain the other combs as well as the ones with brood in, so as to give the double set of the same to the bees. I should very much like to try this idea when it is made clear. 2. I suppose that the hive from which the combs of brood are taken does not

gather much, or, perhaps, no surplus in that season. Is that so? The explanations to these questions would be gratefully received.—J. S. CHAWNER, Leicester, March 19.

REPLY.—1. It is no doubt assumed that nearly all the combs save outside ones will contain brood, seeing that only strong stocks are selected for operating on. And this being so the presumption is that the full number of frames will be made up in upper hive when doubling, just as in the hive from which brood-combs were taken. If no combs are on hand, foundation will be used. 2. If season is good, some surplus may possibly be gathered by the stock robbed of its brood; but the chances are certainly against it.

[3353.] *Working for Extracted Honey.*—I should be much obliged if you will answer the following in B.B.J.:—1. I have worked for sections only so far but wish to try for some extracted honey this year, and so I ask can you work a shallow frame rack and section rack in hive at the same time? 2. My bees are the ordinary native variety. Do you think they would be improved by crossing with the Italian? 3. Do you personally prefer the English or Italian bee? 4. Is it best to buy a queen from a reliable dealer sometimes, so as to improve the breed.—R. B. D., Great Missenden, Bucks.

REPLY.—1. Not only can a box of shallow-frames be worked simultaneously with a rack of sections, but some appliance dealers make a rack that will work shallow-frames and sections in hanging-frames alternately with each other. 2. This is merely a matter of preference; some beemen like hybrid bees, others do not; we are among the latter. 3. The native bee. 4. Yes.

[3354.] *Cleaning Pollen-filled Combs.*—Much obliged for your kind reply to my query on February 18, also to Messrs. W. Woodley and "Fitzfabius" for the further information they have kindly given. I shall be obliged if you will say: 1. If the pure carbolic acid mentioned can still be obtained at your offices, or if not where can I purchase it? 2. What is the best way of cleansing spare combs, pollen of which has gone mouldy in the winter. Will the bees take this off if not too bad?—H. B., Kent.

REPLY.—1. We suppose you mean "phenol" (or pure carbolic acid in crystals), which may be had from any chemist, but not from this office. 2. Combs choked up with old and mouldy pollen are not worth saving. If only a few cells are so filled the bees will (at much labour) remove it.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of February, 1904, was £2,352.—From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

Notices to Correspondents & Inquirers.

*** *Eltham, Kent, as a Bee District.*—A correspondent dating from Woodford, Essex, March 14, writes as follows:—"Dear Sirs,—I should feel very much obliged if you, or some of your numerous correspondents, would be kind enough to tell me through B.B.J. what prospect Eltham, Kent, offers for bee-keeping. I am removing to Eltham next June, and should like to keep bees in a small way, chiefly for supplying my own household with honey. Thanking you in advance, I send name for reference and sign, yours truly, ABEJA. [Our personal knowledge of the district referred to is limited, but we believe that New Eltham would be a fairly good place so far as affording a supply of honey for home use, while not suitable for locating an apiary worked for profit. We know of a few bee-keepers (who would no doubt welcome a recruit) located about New Eltham who have done well in good seasons. One took 60 lb. of surplus honey from a single hive a year or two ago.—EDS.]

C. H. GOODE (Halifax).—Naphthol Beta Solution.—Pure spirit of wine (alcohol) is preferable to methylated spirits in preparing the solution, but as the former is difficult to obtain, methylated spirits is mentioned as the only alternative we know of. The small quantity of methyl added (to prevent people from using spirit of wine as a beverage) does no harm to the bees beyond the smell being objectionable, though not to any appreciable degree.

Suspected Combs.

NOVICE (Dalbeattie, N.B.).—Comb shows no sign of disease apart from being old and black with cells (capped and uncapped), containing fully developed dead bees. It seems a case of death of hatched bees from want of food, and lack of warmth with the capped brood.

ANXIOUS (Surrey).—Comb sent is affected with foul-brood, and we advise "burning" as the proper course. "Treatment" with any kind of drugs is only wasting time and money in such a case.

*** *Owing to pressure on our space some Queries are unavoidably held over till next week.*

Editorial, Notices, &c.

BRITISHBEE-KEEPERS' ASSOCIATION

(*Continued from page* 114.)

CONVERSAZIONE.

After a short interval for refreshments, the company re-assembled in conversazione, when Mr. Cowan resumed the chair, and called attention to a little pamphlet entitled "The Educative Influences of Bee-keeping," by Mr. W. H. Harris, B.A., B.Sc., which had been printed for distribution, and could be obtained on application to the secretary.

The Chairman then announced that Colonel Walker had promised to read a paper on "Judging Honey at Shows." The subject was one about which there was much difference of opinion, but full of interest for all bee-keepers, and the present would be a good opportunity of hearing the views of members thereon. He then called upon Colonel Walker to read his paper on

JUDGING AT HONEY SHOWS.

My object this evening is to discuss the principles that should govern the decisions of a judge at a honey show, and the methods he should use when judging. The records of the past lead me to believe that his office has always been surrounded by a mysterious uncertainty, which the introduction of new features into our schedules during the past few years has had the effect of increasing. Exhibitors—nay, it is whispered, even the judges—hardly know what is expected of them, and as a natural consequence our shows suffer; while the younger members of our fraternity, to whom we look for a supply of judges in the future, remain unenlightened. I am well aware that a high degree of uniformity in judging is not to be looked for, owing to the personal element which must always be taken into account, yet I have no doubt that a nearer approach to it is possible. It is purely with the hope of bringing this about that, rushing in, maybe, where wiser men have feared to tread, I now put forward my own views and practice. I do not for one moment contend that they cannot be improved upon, and I beg the favour of the freest criticism both here and elsewhere from all who are qualified to give an opinion.

On the appointment of a judge for an approaching honey show, it is usual to supply him with a copy of the schedule and rules. Should it not have been sent he should at once apply to the secretary, so that he may have time to study it. If the show is one of importance the judge would do well to mention that he expects to be supplied with a bucket of clean water and a towel for cleansing purposes, and also with a tumbler, a bottle of soda water, and a dry biscuit for the refreshment of his palate. He should bring with him to the show a note-book and pencil, a pocket-knife with which to open glazed sections, colour-test glasses, a Reid's glass honey-taster, and a true $3\frac{1}{2}$in. by $3\frac{1}{2}$in. piece of thick glass for testing the comb-surface of sections. A knob firmly cemented to the middle of one face of this glass makes it a more convenient instrument. To be able to determine accurately the weight of a section is often desirable, and for this purpose I recommend an angler's spring balance, such as can be carried in the waistcoat pocket, and a stiff elastic band. Finally, if appliances, and especially the hive work of amateurs, are to come before the judge, another, and the last, burden to his pocket or hand-bag should be a folding carpenter's rule, for which he may ask in vain should he need one at the show.

Let us suppose that thus equipped the judge arrives punctually, and, while we are about it, that a good manager has everything ready for him, so that he may at once attack the most formidable division of his task, the long array of bottles of extracted honey in their respective classes, light, medium, dark, and heather. Begin with the light class, and determine first of all whether from lack of compliance with the rules there are any disqualifications. If so, it will probably be in the matter of colour. Test any doubtful case with the glasses. An exhibit in its wrong class is disqualified, the judge having no power to alter an entry or transfer the exhibit to another class, in which, for all he can tell, the exhibitor may already have entered the same or another honey.

Let me here suggest that, to mark disqualification, a specially coloured ticket should be provided, on which the judge can briefly state the reason, such as "wrong colour class," or in the case of sections, "insufficient comb-surface." It would be more satisfactory to exhibitors, who, without such notice, may never know that they have been disqualified, and also to the public in general, who may sometimes wonder at the passing over of a handsome specimen.

It will now perhaps be found on looking down the line of bottles that certain exhibits have some obvious bad quality, such, for instance, as faulty condition, that must put them out of the running. These having been turned aside, the remainder must be put to further ordeal. Shall this be done by the allotment of marks or not? On this point judges differ.

It must be obvious that a judge who

shall make his awards blindly according to totals of marks allotted may be led into serious errors. For instance, a certain honey may be excellent in flavour, aroma, and consistency, and yet be found on close inspection to contain objectionable impurities, or, while otherwise admirable, it may be of such poor consistency that it can have no keeping qualities. In neither case should a prize be awarded, however high the totals. And yet I do recommend the use of a table of marks in some cases, and up to a certain stage of the examination; my reason being that where the exhibits are numerous it is difficult for any one, and especially for those who have not had long practice, to bear in mind their several qualities, and above all their merits in point of flavour. Even should memory serve for this, time will be gained in the end by the use of marks; for a selection of those honeys entitled to honourable mention must follow the allotment of prizes, and this can be made most readily by reference to a note-book.

My table of marks would be as follows:

(1) Flavour	40
(2) Aroma	15
(3) Consistency (otherwise density or specific gravity)	15
(4) Condition (freedom from all impurities, including pollen, absence of granulation, etc.) and brilliancy	15
(5) Colour	10
(6) Uniformity and general appearance of exhibit	5
Total	100

(1 and 2) To be a good judge of flavour and aroma a naturally keen sense of taste and smell and some experience are requisite. Cheshire well defines an ideal honey as having "a delicate but characteristic aroma, and a rich flavour, leaving a distinct impression on the back of the palate."

(3) Consistency should be judged by stirring with the glass taster. Honey can scarcely be too dense.

(4) Condition should be judged by holding up to the light. Many honeys are clear, and yet by no means brilliant.

(6) In a good show there is usually little to choose in the matter of appearance.

(5) Colour I have left to the last, because there is more to be said on this point than on any of the others. In the past it has been a sore one, especially with those bee-keepers who have been unable to produce light-coloured honey; but the recent division of extracted honey into three classes has left no room for reasonable complaint. In my opinion, and in accordance with all classic tradition, honey should be of a bright amber varying to straw colour, and to that kind in the light class I should give the highest marks, deducting for any departure on either side. Colourless honey, water-white, as it is termed, I deem unfortunate, and, when it has a greenish hue, objectionable; but such honey may for other reasons win a prize.

With me, all depths of colour that the test glasses allow in the medium class are of the same value, provided that they still have amber for their base. A tendency to dull brown is objectionable. In the dark class I apply the same principle. Muddy browns are objectionable, and no honey suggestive of treacle or blacking is fit for the show bench.

Having examined the exhibits with reference to the table of marks the judge is now in a position to separate from the ruck and to group together as being the best a number greater by one than that of the prizes; for instance, three if there be two prizes, four if three; and casting over in his mind their respective virtues and demerits he will proceed to decide which of them is on the whole the most desirable, allotting to each in succession its proper place. The honey that just misses a prize must be carefully noted, so that the judge can bring it forward at once if called upon to do so, in consequence of the subsequent disqualification of one of the two prize-winners. It will now receive honourable mention, the others worthy of commendation being selected from the note-book.

So for each class of the extracted honeys; but a special word must be said of the heather honey. Here we meet with a difficulty, owing to there being two sources from which the honey known as heather is derived. True heather or "ling" gives us the kind associated with Scotland, and on the other hand honey is gathered in various parts of the kingdom, especially in our Southern counties, from other heaths, especially *Erica cinerea* and *Erica tetralix*, both of which are known as bell heather. These afford a darkish honey possessing a fairly pronounced heather flavour, yet distinct, especially as regards consistency, from "ling" honey; and honeys gathered late in the South have often a strong heather flavour arising from this source. Such honeys are, in fact, a natural blend, and they may contain so much heather honey that it becomes a question whether they are not out of place in the "dark" class in which they have been entered. I have known a case of disqualification for this reason, and it is a question for discussion whether it would not be better to confine the heather honey class to ling

honey, and to admit pure bell heather honey and all its blends into the "dark" class. If as a result much of the dark honey now staged were to be driven out of competition it would be no matter for regret, and judging in the heather class would be simplified.

Sections.

I pass to the class sections, and here, as before, possible disqualification must first be considered. It has been decided, and, as I think, wisely, that all sections on the show bench must expose an area of comb surface not less than 3½in. by 3½in. in outline. Let the judge settle this matter at once with his square of glass, and do his duty, however disagreeable.

The quality of this exposed comb surface is the main point at issue. Every inch of it will eventually come to table, and its business now is to allure the customer. In this class, then, the eye being able at any moment to refresh the memory, there is less need for reliance on marks; but I give my table as follows:—

(1.) Cleanliness and colour of comb surface	30
(2.) Filling, attachment, and weight of section	20
(3.) Quality of capping	20
(4.) Clearness and uniformity of honey	20
(5.) Uniformity and get-up of exhibit	10
Total	100

N.B.—Every prize section to be tasted, and in case of close competition the flavour to be decisive.

1. Every stain, no matter from what source, is a demerit. Pure white, the ideal; but where colouring exists in the nature of the capping, and is uniformly distributed, as in the case of sections from sainfoin honey, it is a disadvantage, but not a serious one.

2. Filling, etc., is important, but needs little explanation. The attachment should be unbroken—no pop-holes.

3. Capping should be thick enough to ensure good keeping qualities; smooth and even.

4. Clearness, etc. For a test, hold the sections up to the light. A thick mid-rib and patchiness are both objectionable.

Having selected a group as before described, open a section case in each exhibit, and taste the honey by means of the thin end of the glass taster. Do not shrink from uncapping a cell if necessary; it can be done with little damage. Above all, be sure that the honey is genuine.

Remember to be liberal with your commendations in this class, in view of the great skill and care that the production of show sections demands from the bee-keeper.

Granulated Honey.

In this class, to which I turn next, my table of marks is as follows:—

1. Flavour	40
2. Granulation and condition	25
3. Aroma	15
4. Colour, and freedom from streakiness	15
5. General appearance of exhibit	5
Total	100

1. Of flavour, nothing fresh need be said.

2. To my mind, the best granulation implies fine and even grain, yet not so much so as to give an impression of greasiness. It should be firm and complete; there should be no trace of fermentation in the sample.

3. Judge of aroma immediately a bottle is opened and again on the honey surface being disturbed.

4. A quite pale yellow or cream-colour is, in my opinion, the best. I do not like a sugar-white.

Shallow Frames.

To judge this class at all on the same lines as sections I consider a grave mistake. Shallow frames are purely for extracting purposes, and by that standard alone should they be judged. The comb should be built out so as to allow the knife to sweep off the face of the capping, for which purpose the surface of the comb should be quite even, but thinness of capping and a little roughness are here not objectionable, as neither keeping nor travelling qualities are necessary. The combs should not be so thick as to be unwieldy. The more thoroughly they are sealed over the better, as this ensures ripeness. Cleanliness is a necessity; but except in cases of close competition, ordinary stains of bee-labour, such as propolis, are no detriment.

Table of marks:—

1. Evenness of surface	30
2. Completeness of sealing, and absence of pollen cells	30
3. Adaptedness in size and shape for uncapping and for the extractor	25
4. Cleanliness and appearance	15
Total	100

N.B.—Each prize exhibit to be tasted. In close competition flavour to be decisive.

It may seem strange to some that quality of honey is not considered in my table for this class. In regard to this I would point out that the main object of a honey show is educational, and that honey, pure and simple, is presented elsewhere, in bottle. The present class is to be taken as an exhibition, not of honey

in a particular stage of preparation, but of the bee-keeper's skill in preparing it for extraction. If the quality of the honey were taken into consideration, it would at once become paramount; skill would remain unrewarded, and the educational value of this division of the show would be greatly diminished. Hence I take it that the judge need only satisfy himself that the honey is genuine and of ordinary quality. This he does as in the case of sections. Should the remark now be made that in that class quality of honey was taken into account, I would reply that it was so only so far as the appearance of the sections was concerned. In judging shallow frames the honey has no æsthetic value, because its quality cannot affect the transparency of the comb owing to the thickness of both comb and mid-rib. Moreover, in this class appearance is of far less value.

Wax.

Here an anomaly has to be faced. It is well known that in its first purity wax is quite white and almost, if not quite, odourless. If we collect enough to form a cake, it has merely the characteristics of a fatty animal substance. I have seen such a cake, the result of a careful selection of clean cappings, placed upon the show bench. It gained no prize in spite of its purity; and I think this was right, because the supply of clean cappings is not sufficiently plentiful to warrant wax of this description being taken as a type. The type is wax carefully rendered from fairly clean combs with as little melting and remelting as possible. It will be of a pleasing light yellow colour, and will possess a characteristic aroma, derived, as I believe, mainly from the propolis with which bees quickly strengthen and varnish their combs, and partly from some admixture of pollen. Taking such wax as the most desirable, my table would be as follows:—

Cleanliness and uniformity in the cake	60
Aroma	30
Appearance	10
Total	100

I would give no credit for special moulding, as I prefer a simple and evenly surfaced cake. Unnatural or obviously added colour or fragance to be considered a detriment. In case of doubt as to purity there can be no harm in the judge's breaking off a small fragment to show the quality of fracture or to test the wax by biting or tasting it.

A commercial class of wax exhibits has lately been introduced of which little can be said, because it is impossible to foretell the fashion in which the wax will be presented for judgment. Such wax, however, should be in cakes of suitable sizes, and its quality and condition, while good enough for household purposes, must not be such as to suggest that the time and trouble bestowed upon its preparation have rendered them unduly expensive.

The Trophy Class.

Here I would give no credit whatever for floral decorations, and should be glad to see them prohibited, as being a cause of unnecessary trouble and expense to the exhibitor. Every article on the stand should have some obvious connection with bee-keeping, and such products as mead, vinegar, etc., should not be taken merely on their appearance. I need hardly say that where two judges are officiating, the duty of tasting should be undertaken as a matter of course by the younger and more robust of them.

May I be permitted to conclude with a few remarks on the relations between judge and exhibitor? The former should remember that when he goes a-judging he is taking up a thankless and sometimes unpleasant task, and that he must not expect that everybody will be delighted with his way of performing it. He can but do his duty without fear or prejudice. He should remember that he is answerable to no one but those who appointed him, and, if he is wise, he will decline, with all courtesy, to discuss the details of his award with any one, and above all with a disappointed exhibitor.

Exhibitors should not imagine that the judge is there to protect them individually from fraud or dishonest competition. Their remedy lies in an appeal, not to him, but to the show committee, and it should be made with as little delay as possible. Disappointed exhibitors should not forget that, apart from any question of bias, the judge has had a better opportunity than they have of forming a correct opinion, and that if any one of them had been judge in his place it is highly improbable that his awards would have given general satisfaction. A judge should, on the face of things, be credited with having done his duty to the best of his ability. I will permit myself a short illustration:—In California, in the early days of gold-seeking, towns sprang up like mushrooms, and in a few weeks a rough, revolver-made civilisation would be in force. Some wandering preacher having been attracted to the settlement, the establishment of a place of worship would duly follow. It is said that a traveller, on entering one of these places, observed, stuck up on the wall, a placard bearing in

large letters this inscription:—"Do not Shoot the Organist; He does his Best."

Shall we bee-keepers not extend a like clemency to the judges of our honey shows? They are erring fellow creatures, and—they do their best.

Colonel Walker on concluding his interesting paper was greeted with loud applause from all present.

The discussion which followed and conclusion of the proceedings will appear next week.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

SHOWS AND SHOWING.

[5476.] Having been an honorary secretary to a rose and horticultural society for nine years, I have had some experience of shows, and think that the schedule of a rose society might serve as a guide for honey shows. I have such a schedule before me, in which the exhibits are grouped in divisions, viz.: First division, for nurserymen; second, for amateurs growing any number of rose plants; third, for amateurs growing less than 500 plants; fourth, for amateurs growing less than 250 plants. On the above principle I would arrange the honey show schedule thus: First division: For exhibits which have won prizes at any county or large show, such as the "Royal," "Confectioneries," "Groceries," "Dairy," etc. Class 1, honey in comb; class 2, sections; class 3, heather sections; class 4, extracted (light); class 5, extracted (medium); class 6, extracted (dark); class 7, granulated; class 8, wax. Second: For exhibits which have not won prizes and from apiaries of more than twelve hives. Classes 9 to 16 as above. Third: For exhibits that have not won prizes and from apiaries of twelve hives and less. Classes 17 to 24 as above. The arrangement of classes, number and amount of prizes would, of course, be in the hands of the schedule makers, but the principle to which I wish to draw attention is contained in the divisions. In the first division alone should prize-winners be allowed to compete—what a grand object lesson! bringing together what is considered by various judges to be the best honey. Although to this division prize-winners would be restricted, yet any exhibitor might compete. It will be seen that in the second division the exhibits have been restricted to those from apiaries of more than twelve hives, and in the third division to exhibits from apiaries of twelve hives and less. This would prevent the "whales" from swallowing up the "minnows" and would give the latter a chance. The above, I think, would get rid of the objection of the same exhibits monopolising all the prizes, and yet not exclude those exhibits from the show. I think also it would assist the judges in their arduous duties. I might add that the restriction of prize exhibits to the first division should apply to those only which have gained prizes at county and other large shows, and not to village shows.—STANLEY EDWARDES (General), Sandhurst, Hawkhurst, Kent, March 28.

THE VOICE OF SPRING.

[5477.] Your correspondent "D.M.M., Banff," in B.B.J. March 17 (page 105) gives the names of three valuable plants for the natural supply of pollen to the bees in the early days of spring. May I add three more to the list? They are: (1) the aconite, (2) the common hellebore (*Helleborus fœtidus*), and (3) the Crown Imperial lily. All three plants are quite hardy, and very rich in pollen. The first blooms long before the crocus, arabis, or wallflower. The second quite as soon, and continues to expand fresh blooms every day for weeks and weeks. And the third, the Crown Imperial lily, gives a good deal of honey as well as pollen, and the flowers are large. Another recommendation in favour of the hellebore is that its pollen is antiseptic, and I am told that it is a probable preventive of foul-brood. I wonder if this be really so? At time of writing I find hundreds of my bees busy in the hellebores; the plants swarm with bees.—GARDENER, St. Ives, Hunts.

BEES AND HAZEL CATKINS.

[5478.] In the BEE JOURNAL for Feb. 11 (page 53) Mr. Woodley writes to the effect that he has never seen bees working on hazel catkins, although he has seen it recorded that others have done so. Mr. J. Skinner in B.B.J. of Feb. 25 tells us that a friend of his remarked, when together they were examining the hazel catkins, "that the bees gathered pollen from the catkins," and that he (Mr. Skinner) told his friend he was wrong "and that he would never see a bee get pollen from the hazel catkins." Such was also my belief until the morning of Tuesday, the 22nd, at St. Albans. It was a beauti-

ful bee-day, and because of its being so delightful I paid a visit to my bees, which are located near a wood some distance from my home. Noticing the bees passing to and from the wood, journeying swiftly, as if on very important business bent, as, indeed, they proved by returning loaded with pollen, I, too, paid the wood a visit, thinking that what shone so brightly in the sun was the bloom of the male sallow-palm, which grows about here in abundance, but on reaching the place, I was much surprised to find only hazel catkins, and, more than this, every clump of the nut-boughs covered with bees. I am now perfectly satisfied that bees do gather pollen from hazel catkins, it may be because there is nothing else to gather from just now, but it was not the case of an isolated bee here and there on the catkins, but every clump of nut-boughs covered with them. Trusting we may all have a successful season.—J. R., St. Albans, March 28.

SHOWS AND SHOWING.

[5479.] I have no wish to make a comment of this subject beyond saying that I hope all exhibitors of honey will accept the new rule right loyally, whatever view they may hold on the matter, and if it puts a stop to dishonest exhibiting it will bring a lasting benefit to all shows. I fear dishonest exhibiting is carried on far more than is generally supposed, if one may judge from what has been reported to me by one of our members, a successful exhibitor, who wrote me last August, saying it was a specimen of many he was then receiving. The letter asked our member to supply him with honey, and to name his own price. He wanted it to exhibit at local shows. I am pleased to say that his offer was refused point blank. Another member wrote that he was fit to think that more than one of the exhibits in the light honey class at one of the large autumn London shows was the produce of his apiary, and he added "I don't speak without a book." If this was so, it clearly shows that dishonest exhibiting was practised under the very eyes of the Council of the British B.K.A. Can it be prevented?—R. Godson, Hon. Secretary, Lincs., B.K.A., Tothill, Alford.

BEE NOTES FROM IRELAND.

[5480.] Stocks have wintered well, and are now busily engaged in gathering pollen, although there are few eggs laid yet. The weather, though bright and sunny, is frosty at nights, and this may be the reason of deferred egg laying. I am commencing stimulative feeding. You may be interested to know that the County Councils of Londonderry and Donegal are considering schemes for instruction in bee-keeping under the Technical Instruction Act. The Donegal Council has advertised for an instructor, and I am convinced this will greatly help bee-keepers, especially beginners. Dr. Traill, the new Provost of Trinity College, Dublin, is a vice-president of the I.B.K.A., and committee meetings are generally held in his rooms. I do not know, however, if he is a practical bee-keeper.

Referring to the question of foul-brood and to letters 5185 (page 295) and 5203 (page 314) in last year's Journal, may I say to Mr. Crawshaw, who wrote both letters, that the foul-brood dummy did not cure the disease? But I can say it checked it, and kept it from spreading. I think this dummy, if kept permanently in the hives, would greatly reduce the risk of foul-brood. On re-reading Mr. Crawshaw's witty article (5185) I can only assure him I do not think the inventor of the dummy (Mr. Jas. Abbott) is prone to childish experiments, and perhaps there is more to be said for the article than has appeared in the B.B.J.

In conclusion, may I express my warm thanks to the B.B.J., especially to such regular contributors as Mr. Woodley and "D. M. M."? Let us hope a good season is in store for us in 1904.—G. F. Gilliland, Londonderry, March 26.

[We have omitted the quotation from "American booklet" on foul-brood, as being a matter we do not care to publish in our pages. It is in our view neither new nor original, and its publication would only tend to raise useless discussions for which we really have no room with busy season just coming on.—Eds.]

BEE-STINGS AND RHEUMATISM.

[5481.] Referring to the letter on the above subject in B.B.J. of March 17 (page 107) I can add my own experience as a bee-keeper to that of Mr. George Franklin, in following issue (page 117), with regard to the effect of bee-stings on myself. I was for many years a great sufferer from gout and rheumatism; indeed, so bad was I at times as to be completely prostrated for weeks at a time, and then had to use a crutch and stick in getting about for a good while before being able to walk properly. But I have not known a pain in the same line for years past, and my freedom from it is all, as I believe, owing to bee-stings! It came about one very hot day in June, so hot that I felt sure that I should have several swarms coming off my hives, of which I had a good many at the time. And so it was. One lot came out and clustered at the bottom of a close growing box-edge. Not being able to shake them down, I had

to pull the bees out in handfuls, but I got them into the hiving skep somehow. A few minutes later another hive swarmed, and the bees settled in the same spot, where a few bees of the first swarm still hung about. I adopted the same plan as before, and got a good portion of the swarm out, and they seemed to settle down in the skep. Then a commotion arose, and bees from both swarms began to come out and run together and started fighting and stinging as if mad! I had no veil on, and thoughtlessly picked up one of the skeps with its swarm, and while running across the garden with it the bees came at me in scores stinging me in the face and neck. After getting as best I could into a place of shelter I got help in removing scores of stings, and I felt very bad for about two hours, and was urged to go to bed, and take advice on what to do. Well, to shorten my story, I got over it, and from that time to the present I have never had a touch of my old trouble with gout and rheumatism, though I am over 70 years of age. Nor have I had any one to help me with the bees all along, and have a good many hives for the coming season of 1904.—G. Brealy, Northants, March 24.

RAILWAY RATES FOR HONEY.

[5482.] In answer to your several correspondents respecting the charges for conveyance of honey by passenger train I give below information that will I hope make the matter clear, and being myself a station master there will be no mistakes. The ordinary rates for honey will average 1d. per pound for distances over 100 miles, and proportionately less for shorter distances. If, however, the honey is in glass jars, and marked as such, it is subject to 50 per cent. increase. Comb-honey in section is only carried at "owner's risk," but not at the "half rates," unless it is so declared, and a "risk note" signed at the time. Any person wishing to do so may deliver to the railway company a "general risk note," properly signed and witnessed, and bearing a 6d. stamp. This will cover all his parcels sent or received, and in this case he should refuse to pay more than half rates. This will also apply to returned exhibits. I send name for reference.—Station Master, March 28.

QUEEN-REARING IN ENGLAND.

By F. W. L. Sladen, F.E.S.

(*Continued from page* 104.)

NUCLEI.

We have now arrived at the last and most costly stage of queen-breeding, it being practically necessary to keep each queen in a separate colony or nucleus until she becomes fertilised, and afterwards until she can be utilised. Nuclei are more economical than colonies, because they employ less bees. In the climate of England the writer has found that it is not practicable to keep a nucleus in which the bees cover less than two standard frames, and it is better that they should cover three or four. The bees are more or less idle from the time that one queen is removed until the next is fertilised. As fertilisation is often delayed, and queens are occasionally lost without being fertilised, the idle period is frequently a long one, and the bees will dwindle rapidly during it unless plenty of brood is supplied.

Formation of Nuclei.—Nuclei may be formed in several ways. Excellent nuclei can be obtained from a strong colony about a week after the first swarm has gone off, in the manner previously described under the heading of "Queens for Every Bee-Keeper." Good nuclei may also be made from any strong colony by taking three or four combs containing hatching brood and stores with the bees adhering to them to an empty hive, the brood being placed in the centre. Care must be taken not to include the queen. There should be plenty of honey in the combs, and not more brood than can be kept warm by the bees, a liberal allowance being made for the large number of bees that will probably return to the parent colony. To prevent the bees returning, a piece of perforated zinc, or of wire cloth, is sometimes tacked over the flight-hole of the nucleus hive, and left there till nightfall of the next day. Another plan for securing a sufficient number of bees is to shake the bees off several extra combs into the nucleus hive at the time of forming the nucleus. Only the old bees will go back, and as these are more inclined to attack any queen or queen-cell that may be introduced than the young bees that remain, it is desirable that they should be got rid of. A ripe queen-cell may be introduced to the nucleus in a protector in the evening, or on the next day, as described under "Queens for Every Bee-Keeper."

Each nucleus may be split into two a week after the first workers produced by its first queen have hatched.

Hives for Nuclei.—Several nuclei may be housed in one hive, the hive being divided into compartments by either movable or fixed partitions. The flight-holes should be as far removed from one another as possible to avoid the risk of the queens entering the wrong nuclei on returning from their flights.

A good nucleus hive for the fertilisation of a few queens may be made by fixing a thin bee-proof partition in the centre of a brood chamber, a nucleus being put on

either side of it with flight-holes arranged as drawn in Fig. 5, A. With such an arrangement there is room in an ordinary 10-frame brood-chamber for adding frames to the nuclei if desired, and by removing the partition, one strong colony can be

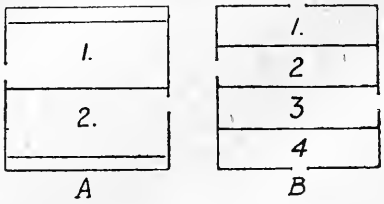


Fig. 5.—Arrangement of partitions and flight-holes in hive for two (*A*) and four (*B*) nuclei.

made of the two at the end of the season, there being a queen to spare.

If more queens are required, the same brood-chamber can, with slight alteration, be divided into four compartments containing two frames each, with a flight-hole at each side (Fig. 5, B).

The nucleus hives should be placed in a sheltered part of the apiary if possible, near shrubs or trees, or other prominent objects.

Nuclei in Upper Stories.—Doolittle attempted to get queens fertilised from nuclei placed over a colony containing a fertile queen, the nuclei being separated from the colony by a sheet of queen-excluder. He thought that if queens could be reared in the upper story they might be fertilised from it, but his attempts mostly resulted in failure, and the plan has been found to be impracticable. Wardell, apiarist to the A. I. Root Company, however, succeeded in 1900 in getting a large proportion of queens fertilised by placing a sheet of wire-cloth, of mesh too small for the bees to pass through, between the two stories.

I have designed and used with success in England a floor consisting of a framework of wood covered with wire-cloth on both sides (see Fig. 6), which, when placed between the two stories, provides the necessary intervening layer between nuclei and colony, with flight-holes for each nucleus, rendering it unnecessary to cut these in the upper story. The floor projects several inches beyond the upper story all round, so as to form a good alighting-board for the queens, and to check them from entering by mistake the flight-hole of the colony below. The two layers of wire-cloth are about $\frac{1}{4}$ in. apart. The floor illustrated was made to take three nuclei, with flight-holes at the sides and back of the hive. It worked with complete success during the somewhat unfavourable season of 1903.

It is very convenient to keep nuclei in this way over colonies containing fertile queens. No apparatus is necessary beyond a spare brood-chamber, the close-fitting partitions, and the special floor. The nuclei are easily formed, they are at a convenient height from the ground for

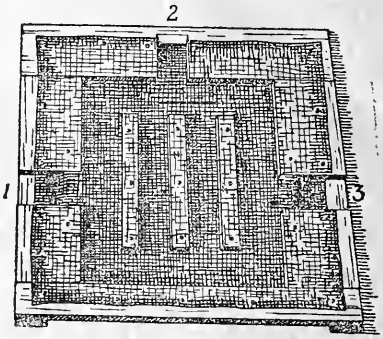


Fig. 6.—Floor for three nuclei in upper story.

manipulation, and, what is more important, they benefit by the heat rising from the colony below, and in order that this may circulate more freely, the nuclei may be separated from one another by partitions made of double wire-cloth on a wooden framework, instead of solid wood.

(*To be continued.*)

Queries and Replies.

[3355.] *Prevention of Swarming.*—I am thinking of altering three of my hives in order to try and stop swarming by fixing a box under the hive to contain a super, as shown in Fig. 17, page 43, in "Guide Book." But instead of making a movable floorboard I shall have to cut a large hole say 9 in. square, in the old floorboard. When the super is not required below, I thought of sliding a sheet of perforated zinc over the hole to give air; I also propose to make another hole in the bottom-box, with a slide to regulate the air, and I therefore ask: 1. Will the hole in the floorboard be large enough if 9 in. square? 2. Will the above hole give too much air-space under the brood nest? If so I can reduce the size of space covered with perforated zinc to 6 in. square. I send name and sign myself.—A Bristol Bee-keeper, March 17.

Reply.—1. We advise you to alter one hive only on the plan proposed, and see for yourself how it fulfils the intended purpose after trial. Anyway, a hole 9 in. square is ample. Our preference is not for the lower chamber under body-box as a preventive of swarming, as a means of starting bees to work in surplus chambers

overhead, and thus secure the room and ventilation in advance that tends to stop swarming.

[3356.] *Transferring Bees.*—Referring to my query (3341, page 108), I regret I did not mention whether bees were in skeps or frame-hives; they are in "Cowan" hives. I want to transfer into new single-wall hives. The lift telescopes over the brood-chamber in winter. I am not going to use old combs when transferring, but new frames fitted with full sheet of foundation, and let bees transfer themselves. The old hives are in a very dirty condition, and combs black with age; that is why I want to transfer. I may also mention that old hives are very dark slate (almost black) colour, and the new one is stone colour. Am I liable to lose many bees through change of colour?—J. M., Dorking, March 21.

REPLY.—Choose the first fine day, and set the new hive on old stand, then transfer such frames of "Cowan" hive as contain brood and stores into the new hive, filling up to full number with frames of foundation as proposed. There is no need to waste time in allowing the bees to transfer themselves in your case.

[3357.] *Transferring Frames and Bees.*—I am a reader of the B.B.J., and find it of great use; but, not having had any experience of transferring bees from one frame-hive to another, I should be glad of your advice on the following: 1. I have bought a "W.B.C." hive, a non-swarming one, with boxes of shallow-frames top and bottom. When would be the right time to transfer them, and how should I arrange the latter? It is a strong colony which I am going to put into it. 2. A friend of mine has offered me a quantity of treacle (about 1 cwt.); would it be advisable to give this to bees as food, and how should I give it? They are all in frame-hives. 3. As I am very much interested in bees and intend having a good apiary, I want to join the Bee-keepers' Association. Could you tell me what steps I should take, and what is the amount of contribution? My apiary contains nine colonies, and I shall be greatly obliged if you would answer in your next issue. Wishing all bee-keepers a successful season.—S. J. H., Sevenoaks, March 23.

REPLY.—1. The frames and bees in brood-nest may be transferred the first fine day when bees are flying. The non-swarming chambers are not used till the bees need room. 2. Treacle is altogether unfit for bee food. 3. The secretary of the B.B.K.A. is Mr. E. H. Young, 12, Hanover Square, London.

[3358.] *Keeping Bees in Bee-houses.*—Will you kindly reply to the following questions? 1. What is the proper distance to place the cages apart in an extractor? 2. Will bees do well if several hives are placed close together in a tool-house? We often see skeps placed so close that they touch, and the bees seem to work very well. Why not in hives fitted with standard frames equally close, all under one roof, with separate entrances? This plan is, I think, adopted in some foreign places. 3. In making candy with pea-flour, should there not be allowed more water than the recipe in "Guide Book?" I have made some and find it hard and dry, though only boiled for less than one minute. If more water is needed, how much more?—I send name, etc., and sign—JEWEL, Henley-in-Arden, March 28.

REPLY.—1. There is no fixed distance apart for cages; it depends on the diameter of cylinder. If you have in view the home-made machine to directions given in our issue of March 17, Mr. Darlington will perhaps say how far apart his cages are. 2. Hives in the open should if possible be placed two yards apart. There is little analogy between skeps worked on old-fashioned lines and modern methods of bee-keeping, but, when kept in a bee-house, frame-hives need not be so far apart as when outside. Those who keep bees under cover often paint the flight-boards of different colours to enable the bees to find their own entrance. The same plan is followed by foreign bee-keepers under similar conditions. 3. The directions in "Guide Book" cannot be improved upon if carefully followed. Have you not added too much pea-flour?

[3359.] *Risk of Infection from Foul-brood!*—I should be much obliged for your advice and opinion as to some of my hives, as I fear the bees are infected with disease. The case is this. Last summer I sent six swarms in skeps to one of the outlying parts of this place, two miles from here, on the Downs, where bees seem to do better even than in our garden and orchard here. About 100 yards from the spot where I placed them a cottager had in his garden several stocks of bees (he is an old and successful bee-keeper, who keeps only skeps on old-fashioned lines). In the middle of the season he found one of his stocks dead, a decayed mass of horrid smelling stuff under the stands of the hive. I did not know of this until some days after the hive was removed. He was persuaded to burn the skep, and much of the stuff that was around them. Whether it was a case of foul-brood or not could not be ascertained, for the wax had been melted before I knew of what had happened. My six stocks seem healthy and worked well after this occurrence. I am sending with this a piece of comb taken from one of my hives in the autumn, as it is

so old it may not be of any use to enable you to judge whether there was any sign of foul-brood in it. At this season I could not well examine straw skeps. I require now to bring these six skeps here, that they may be near to the house, for the swarming season, as where they are at present I could not appoint anyone to attend to them. My difficulty is that I have 19 hives in the garden here, and if I place these six skeps in the same garden, or even anywhere in the grounds, if there should be any foul-brood or disease in the straw skeps, the other hives here might be infected. I have fed the bees in the skeps with medicated candy. How far apart should the two sets of bees be to prevent the possibility of infection if there should be any disease in the skeps? Do you think that there would be danger in bringing the six skeps here? Would it be well to change at once the floorboards of the skeps? I shall be grateful for any suggestions or advice that you can give me.—S. B., Taunton.

REPLY.—We think you will have to rely on personal watchfulness with regard to risk of disease in the skeps, because a less distance than a mile or more away would not ensure immunity from infection by "robbing." The "decayed mass" found beneath the stand of old skep may be no proof of disease, so if skeps are now strong you may hope for the best, and put them as far away as your ground will admit.

LINCOLNSHIRE B.K.A.

ANNUAL MEETING.

The annual general meeting of the Lincs. B.K.A. was held in the Guildhall, Lincoln, on Saturday, March 12, at 3 p.m., and was attended by over sixty members and others. Mr. F. J. Cribb was voted to the chair, and read a letter from Lord Heneage, President, expressing his regret that urgent business detained him in London. In proposing the adoption of the annual report and balance-sheet the Chairman congratulated the members on the continued success of the Association. Mr. Edmund Waite seconded, and spoke of the great improvement of the bee and honey department of the county show since it has been under the management of the Association. The report and balance-sheet were adopted. The report says there has been a small increase of members during the year, which now total 620. The Committee were pleased to state that 70 members (owning 865 hives) had availed themselves of the insurance scheme, and they strongly commend it to the attention of all members. The income from all sources, including the balance of £12 19s. 3d. from the previous year, was £188 6s. 5d., and the expenditure £168 17s. 2d., leaving a balance of £19 19s. 3d. The chief item in the expenditure was for expert work, which amounted to £47 16s. 2d. Lord Heneage was re-elected President, and all the other officers were re-appointed. Mr. H. C. Bentley (Lincoln and Lindsey Bank, Louth) was elected treasurer, he having held the office pro tem. during the year. Dr. Sharp and Mr. F. J. Cribb were appointed delegates of the Association to attend the meetings of the British B.K.A. There was a drawing for useful bee-appliances. Dr. Sharp showed his splendid set of lantern slides on bee-keeping, etc., which were much appreciated and admired.—(*Communicated.*)

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 7 to 10, at Guildford. — Royal Counties Agricultural Society's Show. Bees, Appliances, and Honey Department, under the management of the Surrey Beekeepers' Association. Twenty one classes. Schedules from F. B. White, Hon. Secretary, Marden House, Redhill, Surrey. **Entries close May 14.**

June 21 to 25, at Park Royal, London.—Royal Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A. Increased prizes for B.K.A. Associations as arranged in divisions or groups of counties. Schedules from Edwin H. Young, Secretary, 12, Hanover-square, W. **Entries close May 2, or at extra fees up to May 16.**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

CORNISHMAN (Bodmin).—Show Sections.—1. The two-way section is preferred by most bee-men. 2. Use full sheets of very thin foundation.

S. DARLINGTON (Charing, Kent).—Honey Sample.—Honey is of fairly good consistency, but not nearly so dense as some clover honeys.

G. B. (Northants.).—Honey Buying.—The sample may be quite genuine, though we doubt its being British honey. The flavour is fair, but the appearance is very bad if sold as liquid honey. All purchasers of honey from our prepaid advertisement column would do well to buy on the "Deposit System" to prevent such complaint as yours, and moreover stipulate for home-grown honey if that is desired.

*** *The length of several important articles this week compels us to hold over some letters, &c., in type till next issue.*

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

CONVERSAZIONE.

(*Continued from page* 125.)

After a few words from Mr. Carr expressive of his full and entire approval of Colonel Walker's able and interesting paper, the discussion which had been invited thereon was opened by the Rev. R. M. Lamb, Burton Pidsea, who said he scarcely agreed with Colonel Walker that judges ought not to be questioned, nor should they make remarks with regard to their judging. A judge who was not perfect required education. He recalled to mind a judge who, referring to an exhibit at a show in Yorkshire, described it as the "best heather honey" in his opinion, instead of which, as he (the speaker) explained, it was "ling" honey, and probably came from Wales. In such a case a judge ought to be obliged to a friend who would give him a hint. He thought a judge should be prepared to give his reasons with regard to defects or particular merits in exhibits. If a judge did his best, and was not averse from stating the grounds of his decision, that man he respected and appreciated.

General Sir Stanley Edwardes supposed that Colonel Walker only intended that a judge ought not to be called upon to answer criticisms on his awards. He agreed with the Colonel that if irate exhibitors whose honey had not received a prize demanded to know "Why?" the judge should exercise his privilege and refuse to answer.

Mr. Reid expressed his gratitude to Colonel Walker for so clearly proclaiming the grounds on which he would award prizes, though the Colonel was, perhaps, breaking one of the rules he laid down by making known the standard on which he judged. It was a lesson from which exhibitors could learn something. He (Mr. Reid) did not see why a judge might not tell inquirers of any little faults in their exhibits. He himself had after judging often done so. He considered judging by marks was dependent on the number of exhibits. At a small local show the most likely exhibits could be seen at a glance, and he had learnt from Mr. Carr the plan of taking down those which appeared best, and dealing with them first. They were generally far above the others in quality; therefore marks were hardly necessary, as Colonel Walker had pointed out. With regard to the respective amounts for each particular point, that was open to discussion. In the main he agreed with the Colonel. He would always put flavour first, because of the prime fact that honey was intended for eating, and nothing else. In some prize schedules there were certain classes for extracted honey which must be "free from heather." Now, he—along with many well qualified to give an opinion—thought that a little flavour of heather improved honey enormously; but by a curious anomaly these good honeys could not find a place on the show-bench. They were excluded from the heather class because they were not all heather, and from the other classes because they had a flavour of heather. He strongly supported what had been said about the treatment of judges. The task was a thankless one, and if it involved a long, correspondence in the B.B.J. to defend one's position, it did not encourage the best men to undertake the work.

Mr. Weston added his tribute of thanks to Colonel Walker, and said it was the first time in his experience he had heard a full *résumé* of what might be expected of a judge. It was difficult to criticise, because the conclusions adduced by Colonel Walker were so eminently reasonable. Judges would no doubt differ from him on some minor points; but these were only personal variations, and did not touch the root of the matter. Whether flavour should carry 30 or 40 points, for instance, was a question of that character. The Colonel's remark about having a disqualification ticket was exceedingly good, and he (Mr. Weston) would like to see it carried out at every show. In regard to the classification of extracted honey in jars, he thought they could leave out the dark class altogether, as including prizes for honey which would be unsaleable if put on the market. A thing that could not be sold ought not to be allowed to take prizes on the show-bench. With regard to judging of shallow-frames of comb-honey, he had sometimes found it difficult from the point of view the Colonel so ably expressed in the paper they had heard—viz., the tendency to consider that the prettiest frames of comb ought to take the prizes, while Colonel Walker held that they should go to those most suitable for extracting rather than for the quality of the honey exhibited. Regarding what a judge should or should not do when asked questions, his experience was that he should be exceedingly careful. An exhibitor, as a rule, did not ask questions himself, but put up a mild-mannered friend, who "pumped" what he could out of the unsuspecting judge, and conveyed the intelligence to "all and sundry."

Mr. Pugh, referring to the coloured test-glasses used, thought that a judge should not be troubled about the grading. Surely it was the duty of the steward or secretary to disqualify any exhibit that did not comply with the rules, or was staged in the wrong class. He was very pleased that

Colonel Walker gave so many points to flavour. He feared that judges attached too much importance to colour and clearness, which seemed to be the ruling principle. He had noted even at important London shows that light-coloured, clear honey seemed to take precedence of any other. He was glad that Colonel Walker did not favour "water-white" coloured honey. They in the Midland Counties used to find that light-coloured honey always won the first prize; consequently they favoured the new idea of grouping the counties, because no man could produce that kind of honey in the Midlands, and therefore they had no chance in competing with Southern bee-men. He considered that a heather-blend greatly improved the quality of honey, and saw no reason for excluding honey of that quality from the show-bench. In conclusion the speaker said if he had heard nothing else but the Colonel's paper it was worth his journey of 250 miles that day to hear it.

Mr. J. B. Lamb quite agreed with Colonel Walker regarding the decoration of trophies with flowers. Sometimes these exhibits were so overladen with flowers that the quality of the honey was in a great measure hidden or obscured. With reference to judges discussing their awards, he thought that if approached in a reasonable and gentlemanly way, there was no reason why they should decline to answer questions, but if an angry or dictatorial spirit were displayed, the judge would be within his rights in refusing any information whatever.

Dr. Elliott thought that anything which tended to eliminate the personal element in judging should be encouraged, and that such suggestions as Colonel Walker had mentioned in his paper should come into vogue, so that exhibitors might have a better chance of knowing just what was wanted of them; and, further, that the judges should receive more preliminary training than at present. He recommended that junior judges should be appointed as colleagues to their older and more experienced confrères, and profit by the ideas thus gained, instead of relying on their own personal knowledge.

Mr. Meadows did not think that flowers should be omitted from trophies, because if judiciously used they added to the attractiveness of the display. He would like to see adopted the system in use by most horticultural societies, in which judging was regarded as educational. They had cards prepared in some classes for filling in by the judges, showing where exhibitors had failed. That would be a great help to young exhibitors.

Mr. Belsham agreed with Dr. Elliott's view as to junior judges. When he (the speaker) began to judge he interviewed the late Rev. Geo. Raynor, who supplied him with a list of points somewhat similar to those laid down by the Colonel. Mr. Raynor gave a great many marks for colour and flavour—he was "very strong" on flavour. It was difficult for a young judge to take the responsibility of passing his opinion; therefore it was highly essential that he should act along with an older judge. That would eventually inspire confidence in the younger man.

After some remarks by Mr. Will. Hampton, who thought exhibitors needed educating as well as judges, and who should have facilities for tasting the prize samples, Mr. Willard said the Royal Horticultural Society issued a pamphlet, with rules and regulations or judging. It occurred to him that if the B.B.K.A. could do something of the kind exhibitors would know what they had to work, and judges all over the country would be supplied with an excellent guide.

Mr. Bevan thought it would be a desirable thing from an educational point of view if an unsuccessful exhibitor could be told where and why he had failed, because it prepared him for the next show.

Mr. Carr highly approved of Colonel Walker's conclusions as a whole, and might be allowed to answer a few of the criticisms thereof. He held that when a judge had done his work to the best of his ability it should be allowed to stand on its own merits; but if the judge was expected to discuss his awards with every dissatisfied exhibitor, then he for one would decline any invitation asking him to undertake the task. The work was arduous enough if properly done, and he (Mr. Carr) decidedly objected to go over it all again. As to the educative value of younger or less experienced judges being chosen as colleagues to older ones, that he fully believed in. Personally he was always delighted to have such a companion in judging, and took pleasure in teaching him to the best of his ability. As to the question of judging by colour only, as some speakers seemed to think was done, he thought it was a wrong impression to suppose that any judge decided only on colour alone, as their friend, Mr. Pugh, seemed to imply. Colonel Walker had told them he did not like the water-white colour in honey, and he (the speaker) would certainly never think for a moment of awarding a prize solely for colour. Nevertheless, it could not be denied that the almost universal demand was for the light-coloured grades of honey when people wanted it for market. To come nearer home, look at the advertisements for honey in the B.B.J.! It must be light in colour, or tradesmen could not sell it. There was also the practical side of the question, and on this it might be said we never met a honey of the highest quality that was not light. With regard to judging

by a system of marks or points, some sixteen or more years ago he compiled a table of marks, and these had been used by several well-known judges in making their awards; but the curious part of it was that he (Mr. Carr) never used them himself. Many of those present knew the method he followed in judging, and he believed it was fairly correct. In concluding, he suggested the abolition of the dark honey class, and have only classes for light and medium colour, anything darker than the latter not being deemed up to show-bench form. On the other hand, he would have two classes for heather honey, which must of necessity be dark in colour—viz., one class for pure heather honey, i.e., from "ling" (Calluna vulgaris), and the other to include heather honey (other than "ling"), along with blends of clover and heather. That would meet the difficulty raised. As to the trophy class, a judge must be guided by the wording of schedule, and if he finds it reads "best and most attractive display," he can hardly refuse to allow a few flowers to come in if they add to its attractiveness on the show-bench.

The Chairman said that the Council of the B.B.K.A. had always encouraged young judges to go round shows with their elders of larger experience. With this end in view they had, when applied to, sent experienced judges to County Associations, so that the latter should appoint local aspirants to accompany the more experienced judges, and thus find out best how the work was done. He himself liked to have such a companion when judging. He had noticed when officiating at County Shows that many of the judges were not up to the mark, and could not give a reason for their decisions. It had been said that marks were not necessary, and that judges of long experience could do without them. That was probably true, as a rule, but sometimes the competition was so keen that some system of the kind was necessary to secure the most accurate result. He found that out at a show held in July last year, at which he officiated, the competition in the class for sections was so close that he had to put the best dozens in front of him, and count the defects in each section separately before he could arrive at a conclusion. The same exhibits were staged at the "Dairy Show" in October, and the first prize awarded to the exhibitor who obtained the premier place under his (the Chairman's) judging. As to the criticism of the judges' awards, he should never object to answer a question put in order to obtain information; but if a man came and offensively talked about his honey being better than that which got the prize, he would decline any conversation with that individual. In regard to granulated honey, it was rightly stated that the grain should be fine, and not coarse; but he must say that fine granulation could be produced artificially. When beginning to granulate, if honey was stirred at intervals it would granulate faster and be of finer grain, while if left alone it would granulate coarsely. He concluded by moving a cordial vote of thanks to Colonel Walker for his paper, and hoped the subject would be thoroughly discussed in the B.B.J.

Mr. Carr seconded the motion, which was carried amid cheers.

Colonel Walker, in returning thanks, said he was much gratified at the way in which his paper had been received. He did not come forward as a special authority on the subject, but only to get it thoroughly ventilated, and he hoped his views would be freely criticised elsewhere. There would, through the courtesy of the Editors of the B.B.J., be better facilities for studying the paper when it appeared in print. The point most touched on in the course of the debate was whether it was wise for judges to avoid argument as to the details of their awards. He still thought he was right. Of course a good deal depended on temperament and character—i.e., whether the judge was one who could discuss such things with perfect dignity and satisfaction to himself; also whether he thought he was likely to succeed in convincing the inquirer, and naturally, of course, the attitude of the latter. But although exceptions might exist, he (the speaker) deemed it wiser not to discuss with an exhibitor on the spot. Concerning marks, no doubt it was often possible to arrive at a correct decision without them; at the same time, he thought that if judges could come to a unanimous opinion, nothing could secure uniformity better than a system of marks, and he strongly advocated the adoption of some scale. Mr. Reid had said something to the effect that flavour should be predominant, especially in sections. He, however, regarded sections as an exhibition of skill rather than of honey. In extracted honey flavour had been fairly liberally treated in his table. He did not know from Mr. Reid's remarks whether that gentleman thought it would be better to merge bell-heather honey into the dark class. If so, it would certainly take first prize there—in fact, he was convinced that many of the dark class honeys that were so appreciated were mostly blended with bell-heather (Erica cinerea). It would be exceedingly difficult to make distinctions where there were blends of heather honey, but possibly two classes might be formed as suggested by Mr. Carr. Their friend (Mr. Pugh) had contended it was the business of secretaries to see that exhibits were put in the proper class. He (the Colonel) quite agreed—if they would only do it! He was

in full accord with Mr. Cowan, Mr. Carr, and most other experienced judges when they said that light honey had the most delicate flavour. There would always be some who liked a strong flavour, such as was found in darker honeys; but whatever might be said, the light-coloured honey always "came out on the top," and exhibitors must reconcile themselves to facts. The idea of junior judges going round shows in company with those possessing long experience was an admirable one. Mr. Carr had expressed his agreement with most of what he (the Colonel) had said in his paper. He could only reply that the knowledge he possessed had been gained through the privilege of accompanying Mr. Carr when judging. His (the speaker's) first impressions emanated from Mr. Carr, and probably he would have never written his paper but for such inspiration. He thought that trophies must be judged according to the schedule; if the latter described them as an exhibition of honey, then the honey should secure the prize, not the decorations.

The discussion on Colonel Walker's paper then closed.

On being called upon by the Chairman, Mr. Reid said he had been making experiments with the object of obtaining a suitable material for forming the inside body-box of hives, in view of the spread of foul brood. The question how to disinfect a hive, once foul brood had attacked it, was undoubtedly a very difficult one to answer. Very few bee-keepers could do it with success, consequently hives were often sold in a state which caused bees put in them to be infected with the disease. The thing wanted to save this trouble was a material that could be disinfected by means of heat. He had found the *desideratum*, and it could be heated red-hot. It was a mineral substance, asbestos being the main foundation of it—a fibrous mineral, not like slate. It was intended for use inside the hive, and after heating red-hot it would be uninjured—in fact, as good as ever. It was also waterproof, and did not let either air or water through. At present his (Mr. Reid's) experiments had not reached a very advanced stage, and he could not say much that was definite; but he would ventilate the matter further when he had made its use in the construction of bee-hives more perfect, and hoped to place full information before bee-keepers later on.

The substance, in the form of thin, oblong sheets, was handed round for general inspection, and the merits of it were discussed by Messrs. Walker, Lamb, Carr, Hampton, and Lee, the last of whom stated that he would not hesitate about using it himself.

In reply to questions and remarks made concerning the material, Mr. Reid said that the price would be about 1s. 2d. for four pieces similar to those shown, that the substance was not brittle like slate, but could be nailed or bolted on to wood, so that there would be no difficulty in fixing it, that he had tried it in a hive last year, adding that if Mr. Lee would like to make a sample hive and use this material he would be pleased to let him have the necessary pieces.

The Chairman thought the idea well worth considering, and was very glad to know that Mr. Reid proposed to work it out further, after which the matter could be fully discussed in the B.B.J. before it was decided to make such hives.

The Rev. R. M. Lamb submitted his new section-holder with revolving frame, made to accelerate the removal of sections easily. He hoped to be able to explain the system in detail in the columns of the B.B.J. later on.

The specimen was then passed round for examination, and Messrs. Walker, Carr, Hampton, the Chairman, and Mr. Sladen spoke on its qualities, the general opinion being favourable to the invention.

The proceedings concluded with a hearty vote of thanks to the Chairman.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

"THE VERTUES OF HOONNI."

[5483.] Neither Editor nor printer is to take any liberty with the heading of this article! There is an inimitable old world flavour about it which any modernising would taint or dissipate. We moderns arrogate to ourselves something like a monopoly in the production of really good honey, but the ancients in their way could turn out the genuine article. We have only to turn our thoughts to the long past, and recall Virgil's:

> Huge combs of golden juice,
> Not only sweet but fit for use.

Rev. Mr. Butler's "rigt virgin hooni;" or Rusden's right virgin honey to remember that the past had its own standard of what was best and choicest. This last right fine stuff graced the table of a bee-keeping king; but thousands of years before we know of another king, who loved honey and

recommended its use to his son (and others) "because it is good."

Epicures, who knew a good thing, ate plentifully of honey; but there were many epicures who had their own standard of what was best. Virgil rather favoured that which was pure and clear. Pliny had a preference for what had a slight tint of yellow "gathered in the dogdays." Long ago they classed honey gathered from the heath in a lower grade than champain honey, with woodlands honey as an intermediate class, considering the first "coarse and red!" If one was acting at a honey show in the 17th century here is the standard which would regulate the apportioning of prizes. "Good honey is clear, odoriferous, yellow like pale gold, sharp, sweet, and pleasant to the taste, of a mean consistency between thick and thin, so clammy that, being taken up with the finger end, in falling it will not part, but hang together like a long string, as that used to do which is clarified. Right virgin honey is more crystalline at first." Such was the honey of Spain, Narbonne, in France, and also the famous honey of Hymettus and Hybla. Even in the days of Aristotle it was noted that the best honey lay at the bottom. All ancient honey was not of this "incorrupted puritie," for some, we are told, make one work of all "pounding and compressing honey, wax, and bees, and skaddons, and vandrach, all together! Then with a press *violently wring out all that will run!*" Some of our old world writers find a "vertue" even in this conglomerate mass, as honey with dead bees in it was declared to be an excellent purgative. An English writer, so late as 1792, says he preserved a number of dead bees yearly, dried to a powder, "which taken inwardly will give immediate relief in the most excruciating pain when all other means have failed." Similar testimony was given in 1609, when it was declared "this mixture had a power to clens." Here are a number of other "vertues": 1, It nourisheth very much; 2, it breedeth good blood; 3, it prolongeth old age; 4, it keepeth all things incorrupt; 5, it is a sovereign medicament, out and in; 6, cures a bite of a serpent, or a mad dog; 7, preserves fruits; 8, good as a "plaister;" 9, who has not heard of the virtues of mead; 10, and hydromel; 11, and metheglin; 12, it cures the sting of a bee; 13, it produces hair in baldness; 14, cures wounds and ulcers; 15, makes a smooth skin; 16, gives white teeth; 17, stays vomiting; 18, assists teething; 19, preserves natural heat; 20, good for the falling sickness, etc., etc. I need not repeat all the virtues of honey, for are they not written in many of the ancient bee books?

Truly if the "vertues of honey are transcendant," so are the virtues of mead or metheglin! 1, it recovereth a lost appetite; 2, it openeth the passage for the spirit and the breath; 3, it softeneth the bowels; 4, it is good for them that hath the cough or ptisick; 5, it is good as a medicine against agues, cachexies, diseases of the brain, and epilepsy; 6, it is very good against the yellow jaundice; 7, it is a counterpoison; 8, it nourishes the body against consumption; 9, and finally, it is the best thing in the world for the prolongation of life! It excelleth all wines, and may well, therefore, be called a "soveraign liquor." Perhaps, if it could only be discovered honey was the secret of "She's" long existence. Seeing it is the "best thing in the world," some one might try it. Several of the old philosophers, indeed, credited it with prolonging their days.

Honey is the symbol of pleasure and delight; metaphorically it means any pleasing dainty. Honey signifies marriage, and the honeymoon is supposed to be the sweetest period of existence. Of old, honey was used liberally at marriage feasts, and still has its symbolic significance in some countries. The name Honey is from the German Honig. Among the Greeks the goddess Melissa was adored because she taught them the use of honey, from which we have Apis mellifica. Some, however, say Bacchus first taught the use of honey. The ancient pagans used honey plentifully in their sacrifices, especially the people of Athens and Rome. The Egyptians also ate it at the feast of Mercury, and coming nearer home it figured at the feasts of Odin and Thor; and the roofs of Valhalla echoed to the laughter of "Heroes drinking deep draughts of mead." The praises of good honey have been often sung. What is sweeter than honey? is, perhaps, the most ancient riddle in existence, and in the same book we read "Pleasant words are as an honeycomb, sweet to the soul and health to the bones," as well as many more wise sayings in its praise. Mahomet describes honey as "this sweet, wholesome substance, which sustains and strengthens the body, which cures all maladies, a thousand times preferable to the poisons administered by the doctors to the human race." That land "flowing with milk and honey" is symbolic of all that is good and pleasant, all that is rich and fertile, and all that is beautiful and picturesque, for such a land must be clothed with rich pastures, fair and sweet blossoms, and trees clothed in a flowery wreath of bloom.

Thus, we find that writings, sacred and profane, from the most ancient times, and peoples of all nationalities join in the praises of good honey. All enjoy its unmatchable sweetness, and admire its innumerable virtues. Ancient Rome, and Athens, and Egypt, and Palestine have admired, loved, and feasted on honey from

the honeycomb. In this enlightened 20th century we are too often lax in singing our pæan of praise in favour of this sweet, luscious, aromatic dainty which is one of God's best and chosen gifts to man.—D. M. M., Banff.

A HOME-MADE EXTRACTOR.

[5484.] Some of the criticisms passed by your correspondent "Pro Bono Publico," who writes on page 116, on my "Home-made Extractor" are quite justified; others are not. I hope, however, he did not expect me to describe how to make an extractor of the "Cowan reversible," geared, etc., type. My intention was to explain how I made an extractor at home of the roughest material. I have no doubt that many of your readers could improve on it; in fact, I should myself make several alterations if I had to make another. If your correspondent had seen my anvil and my heating arrangements I fear his notion of extractor building would have been still more severely tried. But can we be quite sure that his questions are asked "pro bono publico"? or has he an "axe to grind?" However, I will try to answer his questions as enumerated. 1. How to make bearing in absence of brass candlestick? On this point I may say several ideas occurred to me, e.g., a steel point fixed upright in centre of bottom of cylinder, and a cup made to fit in the bottom end of spindle; or an iron bar placed across and resting in holes made in side of cylinder, then at a convenient height the bar to have a cup hollowed out for spindle to rest in. I don't see, however, why a brass candlestick should not be available; they are common enough. 2. Size of cone supporting the cup? The diameter of the base of cone as it stands now in cylinder is six inches. 3. Soldering brass? I had not the slightest difficulty. Of course, the brass candlestick was boiled in strong soda to remove last vestige of grease, and was afterwards "tinned." 4. Size of triangular pieces cut out of edge of bottom? I don't know! It was a fidgetty job. I cut less than I thought would be enough, and then beat over the edge. Where there was any overlapping I snipped a little more. 5. Number of holes at each end of top-bar? Two are mentioned; only one at each end is necessary. 6. Size of cage? Yes, there is a mistake here, either on my part or that of the printer. The length of eight pieces forming squares at top and bottom of cage should be 13 inches, not 23 as given. 7. How much was really home-made? The parts made by local blacksmith are definitely mentioned in original article. 8. Extracting power? I am sending sample of honey extracted with this machine to the Editors, and I ask them to judge of its consistency.* I may say we have no heather-honey here. 9. Use of wide-ended frames? When I made machine I had not used wide ends, but this criticism is a point scored for "Pro Bono Publico." 10. Square spindle in round hole? In this case my critic is a bit "too previous." The square spindle is rounded, where it works in round hole. 11. Instability of cone arrangements? For the last two seasons I have extracted all my honey with this cone in its present position. It is now as firm as a rock. In conclusion, may I ask "Pro Bono Publico" to make his criticisms in a little more kindly spirit? Criticism is a necessary and good thing, but letters in the B.B.J. occasionally make one think that bee-keepers may become infected with the venom of their subjects.—S. Darlington, Charing, Kent.

LEAKY ROOFS.

[5485.] I should like to mention the method I use in making the roofs to my hives, which, besides being cheap, is very effective, if you think it of any interest to your readers. The top is made from the two sides of a Quaker Oats box, each piece measuring 24 in. by 12 in. by $\frac{3}{8}$ in., being screwed down firmly to the sides; on the top of that I put six thicknesses of brown paper, which has been made waterproof by being coated with boiled linseed oil, and is put on while still wet. When the boiled oil is dry I put on the sides of another Quaker Oats box and screw down as tightly as possible, there being thus two thicknesses of $\frac{3}{8}$ in. wood, and in between same are six thicknesses of brown paper. The usual ridge-piece finishes same.

I will not encroach on your valuable space any further, my letter being already longer than I intended. I send name, etc., and sign—Lex, Leicestershire.

AUTHORSHIP OF BOOKS ON BEES.

[5486.] Can you inform me if the Rev. William Dunbar wrote a book on bees, and if so, what is its name? He was a bee-man from 1820 to 1850 at least, and wrote considerably on the subject. Mr. Dunbar was a correspondent of Bevan, and he also engaged actively in the "Nutt" controversy. A few lines in reply will oblige.—M., Banffshire, March 10.

[The Rev. William Dunbar, of Applegarth, wrote part of "The Natural History of Bees, comprehending the uses and economical management of the British and

* See page 130 for reply to this query.

foreign honey bee, together with the known wild species." This appeared in 1840 as vol. 6 of the Naturalist's Library, conducted by Sir William Jardine. Mr. Dunbar's name did not appear on the title page, although there is no doubt that he wrote 238 pages of the book, the remaining portion, relating to foreign and wild bees, being written by Mr. Duncan. Mr. Dunbar refers to his (the writer of the book) statement that he published some of his facts in the *Edinburgh Philosophical Journal.* For instance, on page 63, respecting the queen, we read: "When she has laid a cluster of eggs to the number of thirty or forty, more or less according to circumstances, on one side of the comb; instead of laying in all the empty cells in the same quarter, she removes to the other side, and lays in the cells which are directly opposite to those which she has just supplied with eggs, and, generally, in none else." Bevan in his editions of 1827 and 1838 alludes to this observation of Mr. Dunbar's. The book was first published by W. H. Lizars, in Edinburgh, but has been reprinted several times. The last reprint without date was brought out in London by W. H. Allen and Co.—EDS.]

CANDY MAKING.

[5487.] I notice that a Welsh correspondent on page 100 desires to know the "secret' of my candy-making, which you, Sir, described as being very good in B.B.J. of February 18 (page 70). The secret is to carefully follow the instructions given in the "Guide Book," and use home-made vinegar (made from sugar), and not malt vinegar.—B. H. S., Hardres.

WEATHER REPORT.

WESTBOURNE, SUSSEX,

March, 1904.

Rainfall, 1·13 in.
Heaviest fall, ·22 on 7th.
Rain fell on 15 days.
Below average, ·89 in.
Sunshine, 116·2 hours.
Brightest day, 16th, 9·8 hours.
Sunless days, 9.
Below average, 30·4 hours.
Maximum temperature, 59° on 9th.
Minimum temperature, 26° on 1st.
Minimum on grass, 22° on 1st.
Frosty nights, 12.
Mean maximum, 46·1.
Mean minimum, 34·3.
Mean temperature, 40·2.
Below average, 0·5.
Maximum barometer, 30·50 on 11th.
Minimum barometer, 29·46 on 30th.

L. B. BIRKETT.

QUEEN-REARING IN ENGLAND.

By F. W. L. SLADEN, F.E.S.

(*Continued from page* 128.)

Management of Nuclei.—The nuclei must be regularly attended to through the season, frames of brood and stores being given or removed as often as necessary; also ripe queen-cells given as soon as possible after any queens are removed or lost, and before any accidentally-formed queen-cells can mature. A nucleus should never be without plenty of food, nor should it remain for long without brood. In examining a nucleus it is seldom necessary to search for the queen; the presence of eggs indicates that she is probably fertilised. If after a fortnight from the introduction of a ripe queen-cell no eggs are to be seen, another queen-cell may be introduced. When a queen is removed, or it is suspected that she is lost, the nucleus should be marked by placing a stone upon the roof, or by some other easily-recognised sign. The first batch of queen-cells that ripens will be distributed to the nuclei thus marked. The queen-cells should be carried to the nuclei in a small box lined with warm cloth, and in chilly weather heated pieces of brick or tile should be wrapped in a cloth and placed in the bottom of the box, or a bottle of hot water may be employed.

Each nucleus should be provided with a slate or card, on which the date when the ripe queen-cell was given, the strain of queen, and other things of importance are to be noted. Many breeders use printed dials with movable pointers.

Nuclei may easily be over-powered by robber bees from other hives, consequently the size of the flight hole should be kept small; 2in. by $\frac{3}{8}$in. is a suitable size. In the robbing season the hives should be opened only during the hour before sunset, and weak nuclei should be united without delay, so that all may be strong. If a nucleus is seriously attacked by robbers the usual remedies may be employed, but it will generally be found impossible to save it. With care, however, serious robbing can be entirely prevented.

At the close of the honey-flow the nuclei will require to be fed with a little thin syrup twice or three times a week, for the double purpose of keeping them supplied with food, and of stimulating the queens to take frequent flights, thus hastening the time of fertilisation. Any good pattern of stimulation feeder will do where only a few nuclei are kept, but where several nuclei are contained in one hive a feeder with divisions, so that all the nuclei in one hive can be supplied at one filling without the bees getting mixed, is the best. A close-fitting division-board feeder divided into two compartments may be made to take the

place of the partition in the centre of a two-compartment nucleus-hive. Or the feeder may be made to form part of one of the side walls of the hive. To prevent robbing, the nuclei should be fed in the evening, and care must be taken to prevent bees from other hives getting to the syrup in the feeders.

Other Methods. — Introducing Virgin Queens to Nuclei.—The time that the nuclei are idle can be shortened by distributing the queens to them after they have hatched, instead of in the ripe cell stage. Newly-emerged queens can be dropped into the nuclei without caging with little loss; but virgin queens over three days old are often killed, even when introduced in cages.

Where a number of cells are kept in a hive until the queens emerge, each one must be placed in a separate cage or nursery, provisioned with food, to prevent the queens fighting and killing one another.

The illustration (Fig. 7) shows Titoff's combined nursery and introducing-cage,

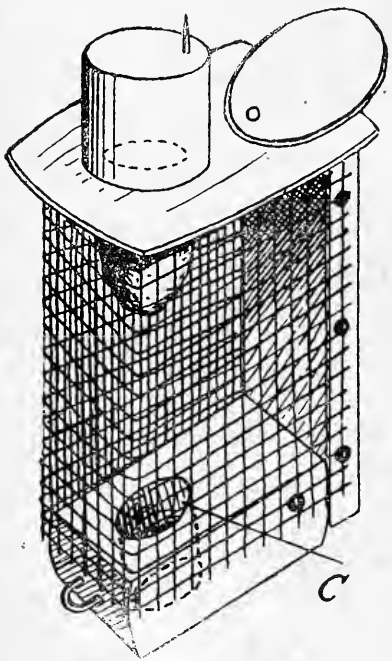


Fig. 7.—Titoff's combined nursery and introducing-cage.

which is employed in Root's apiary. The hole C is filled with candy, through which the bees eat in liberating the queen, the principle being the same as that of the Miller introducing cage, which will be described later. A number of these nurseries, each containing a queen-cell, are held in the centre of a frame which is hung between two combs of brood in a strong colony, preferably a queenless one, and they are distributed to the nuclei as they are required.

A few breeders hatch their queens outside the hive by means of artificial heat. A specially-constructed lamp-nursery is sometimes employed. A good chicken-incubator can, however, be adapted to this work. The temperature should be evenly maintained at from 96 deg. to 97 deg. Fahr.

FERTILISATION OF QUEENS.

It is safe to say that queens are quickest fertilised in sunny weather, during the honey-flow, when there is little or no wind, and the temperature is high. If the weather be favourable and drones are plentiful, plenty of eggs should be found in the nucleus about the fourteenth day after the ripe queen-cell was given. After the termination of the honey-flow fertilisation is delayed. Queens that are not fertilised within a reasonable time often disappear, and, occasionally, when the hive is opened, they may be found "balled," i.e., hugged, by a cluster of bees. Balling is liable to result in the death of the queen, or in serious injury to her wings, legs, or antennæ. Frequent manipulation in unseasonable weather often induces balling. When a queen is found balled it is best to leave the bees alone for some days. A queen will sometimes commence laying without being fertilised. The eggs laid by such a queen will only produce drones, and she is worthless. When the eggs are laid irregularly, three or more being placed in some cells and none in others, it may be suspected that the queen is a drone-breeder, but the only way to tell for certain is to wait until the brood develops. Similar drone-brood is also produced by fertile workers.

A virgin queen that has a malformity of the wings, or has received some injury to them sufficient to prevent flight, can never become fertilised, and should be killed as soon as she is discovered. Malformity of the wings is often the result of a chill, which prevents their development. It is, therefore, very important that the queen-cells should be kept at a proper temperature until the queens emerge. This can be ensured by keeping such cells in contact with brood in the centre of the hive with a sufficient cluster of bees.

It is well to wait until a queen has produced worker brood before making use of her.

DRONES.

For fertilising queens with drones of a particular strain, and for getting them quickly fertilised before or after the most natural season, it is desirable to rear drones in large numbers. A frame of

drone-comb, placed in the centre of the brood-nest of a strong colony of the required strain shortly before the swarming season, is soon filled with drone-brood producing plenty of drones, which will be flying from this colony about a month after the comb was given.

If drones are required late in the season they should be reared early in July. If the drone-breeding colony is not already strong in bees it must be made so by the addition of worker-brood. The laying of drone-eggs should be induced by slow feeding, if necessary. Soon after the eggs are hatched the drone-comb should be given to a strong queenless colony or to one that is superseding its queen to be finished, and another empty drone-comb should be given to the drone-breeding colony to be filled with eggs, and so on, as many combs of drone-brood being obtained from the colony as possible. It may be necessary to feed freely to prevent the bees from dragging the drone-pupæ out of their cells.

Undesirable drones may be collected in drone traps fixed to the flight-holes of the hives which contain them and afterwards killed.

The drone exerts considerable influence over his progeny in temper and working qualities, as well as in other ways. I have noticed that drones prefer open country for their flights, and are specially fond of high or rising ground. In such spots I found it quite easy to attract in a few seconds a large swarm of drones to a virgin queen which was raised by a kite twenty to thirty feet from the ground several times between midday and 3 p.m. on one or two successive warm and sunny days in July, 1902. As soon as the queen was lowered the swarm broke up into numerous knots or groups, which gradually dispersed. The same queen also attracted a number of drones when she was placed on the top of a wooden fence-post only three feet from the ground, and here even the cage that she had been confined in for a few minutes proved to be attractive. Other virgin queens did not at first entice any drones, but after a few drones had been induced to follow them, they became very attractive, and remained so from day to day.

It appears that little notice is often taken of virgin queens in their first few flights, and that the rapidity with which their attractiveness develops is largely connected with the frequency of their flights and the abundance of drones.

Attempts that have been made to get queens fertilised with certain drones by confining them together have generally resulted in failure.

(To be continued.)

Queries and Replies.

[3360.] *Bees Visiting Ditches for Water.*—I am in a difficulty with my bees, which I believe must be a common one in the country, where there is no system of drainage, and I am, therefore, writing to ask whether you or any of your readers who have suffered in the same way can suggest a satisfactory remedy. My apiary is situated close to the road, and on the other side of the road is a lane down which a ditch runs, which receives the drainage from a house. It is only from a dozen to twenty yards away, and last summer the bees used it as a watering place, with the consequence that a great deal of brood died in several hives towards the end of the season. The disease among the bees was neither "chilled" nor foul-brood. The larvæ and pupæ just died, remaining white, and the bees carried them out. Every morning I found the front of the hives strewed with miniature legs and wings, etc. I provide the bees with plenty of water in the garden, but this does not prevent them from visiting the ditch. I am thinking of watering the ditch with carbolic acid several times a week, but if I have to keep this up all through the summer it will be much trouble, and a considerable expense, and I was not at all sure that it will be efficient. I ought to say my bees neglected the water in the garden towards the end of last summer, but this spring I have provided three large watering dishes all of which are visited by the bees, and yet they go to the ditch. I have taken in the B.B.J. ever since I began bee-keeping, and find it very helpful.—(Miss) S. K. S.

Reply.—Whatever may have caused the death of brood in question, you may be quite sure it was not a result of bees visiting the ditch referred to. We advise you to make the watering-troughs at present in use as enticing as possible to the bees, not open dishes of water, but supplied with facilities for their taking up moisture from a damp surface. Then fill one of the three dishes with spent tea-leaves rinsed in water, to which a little salt has been added. This will probably cause the bees to resort to this in preference to the ditch which causes the trouble complained of.

TRADE CATALOGUES RECEIVED.

E. H. Taylor, *Welwyn, Herts.* — Mr. Taylor's list for 1904 has been entirely rearranged and still further enlarged. It consists of 88 pages, is printed on art paper, the whole being well got up, and profusely illustrated with over 150 en-

gravings. Every hive seems to be illustrated (many with sectional views), and fully specified with regard to details of construction, a feature which affords a correct idea of what is being selected and purchased. There are also several pages of "Hints on Bee-Management," and an illustrated price-list of appliances used in poultry -keeping, making up a handy book of reference for bee-keepers and poultry-fanciers.

JAS. LEE AND CO. (Office and Power Works: *Martineau Road, Drayton Park, Highbury, London.* Show-room: 10, *Silver-street, High Holborn, W.C.*) also send out a capital catalogue for 1904, having for its frontispiece a full-page view of their fine new "Monk's Acre" Apiary, Andover, Hants. Without being unduly large, Messrs. Lee's new list is again notable for the number of bee appliances which have been specially designed by themselves. Most of the hives illustrated were originally designed and made by Mr. Jas. Lee, the senior member of the firm, a fact which will give confidence to those ordering goods from the original designer, who is also a practical bee-keeper of many years' experience. The large apiary at Andover being mainly run for honey and swarms. Mr. James Lee, who is in charge, has ample facilities for practically testing all that is new in appliances used in honey-production, so that all the goods made by the firm have stood the test of trial in the hands of the makers.

THURMAN AND CO., *Friary Mill, Dorchester, Dorset.*—Messrs. Thurston's list for 1904 is brought quite up to date, and includes all that is needful for profitable bee-keeping. As announced by themselves, Messrs. Thurman do not exhibit at shows, but rely on the quality of their work and the fact that the manager of the firm is a practical bee-man of long experience, so that no goods are sent out that have not been practically tested by the makers. They also supply bees, and send out a practical apiarist to assist customers when needed at a moderate charge.

WARWICKSHIRE B.K.A.

ANNUAL MEETING.

The annual general meeting of the Warwickshire Bee-keepers' Association was held at the Grand Hotel, Birmingham, on Thursday, March 24. Dr. Thomas Savage presided over a large attendance, which included Major Deykin, Messrs. H. B. Brooks, A. H. Foster, T. L. Griffiths, J. F. Hibburd, R. Holliday, W. Mills, D. McMichael, W. Penn, C. H. Saunders, B. Swain, J. N. Bower (Hon. Sec.), J. R. Ingerthorp (Assistant Secretary), and G. Franklin (Expert). In their twenty-fourth annual report the Committee recorded continued progress, a considerable number of new members being enrolled last year. The accounts showed that the income amounted to £111, and the expenditure to £94, leaving a balance of £17 to the good.

The Chairman, in moving the adoption of the report, made a humorous and at the same time suggestive speech. He had been told that every hive was worth £5 a year to an industrious or careful bee-master. He therefore took it that the bee was to the English cottage as was the pig to the Irish cottager—"the gintleman who pays the rint." He would therefore sugest to every person not a member of the Association the desirability of joining it at once, so that they might speedily be placed in a position of independence of the landlord. He might also refer to honey as an article of diet. It was apt to be looked upon as merely the equivalent of sugar, but it was more nutritious; and from the medical point of view he would urge the public to seriously consider the propriety of taking it more frequently. If his advice were folowed then they might come to look upon the bee-hive as Dr. Johnson looked upon a brewery—as having potentialities of wealth beyond the dreams of avarice.

The report was adopted. Lord Leigh was re-elected President, and the other officers were also re-elected. At the conclusion of the business Mr. Franklin delivered a lecture on "The Management of Bees."—*(Communicated.)*

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 7 to 10, at Guildford. — Royal Counties Agricultural Society's Show. Bees, Appliances, and Honey Department, under the management of the Surrey Bee-keepers' Association. Twenty-one classes. Schedules from F. B. White, Hon. Secretary, Marden House, Redhill, Surrey. **Entries close May 14.**

June 21 to 25, at Park Royal, London.—Royal Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A. Increased prizes for B.K.A. Associations as arranged in divisions or groups of counties. Schedules from Edwin H. Young, Secretary, 12, Hanover-square, W. **Entries close May 2, or at extra fees up to May 16.**

*** *The full Report of the B.B.K.A. Meetings and the subsequent Conversazione being now completed, several Articles, unavoidably held over for want of room, will appear next week. In reply to inquiries we may also say that the "Homes of the Honey Bee" pictures will be resumed in next issue.*

Editorial, Notices, &c.

FOUL BROOD LEGISLATION.

A communication has reached us from Mr. George Saunders, Hon. Secretary of the Cumberland B.K.A., and so far from requiring any special request to allow its insertion, "in all fairness," we remove it from the ordinary "Correspondence" column, and give it as much prominence as our pages will allow, in order that we may reply to the question with which his letter concludes. Mr. Saunders says:—

"In reference to your editorial in April *Bee-Keepers' Record*, I am sure that you will allow, in all fairness, this letter to be published in the next issue of the BRITISH BEE JOURNAL, and also in the next *Bee-Keepers' Record*, as you have evidently written forgetful of the facts and statements made by me in my long correspondence on the subject with the Council of the B.B.K.A.

Briefly, to give only an abstract, I wrote that I had asked the Right Hon. James W. Lowther, M.P., to take the matter up, which he has most kindly done, and received a letter from Lord Onslow, definitely saying that he would pass this 'Foul Brood' Bill as a Government Measure, if the various Bee-keepers' Associations will first get their County Councils to ask him for the Bill, and put it into force when they get it, and there is no other stipulation!

The Cumberland County Council has already promised to do so, and it only remains for others to do the same. I also stated that a letter has been received by Mr. Lowther from Sir Horace Plunkett's private secretary on very similar lines, so that Mr. Lowther is quite convinced that if the matter is taken up *now* and pressed home, as advised, there will be little, if any, difficulty in getting an Act passed this Session.

As is well known, the Irish B.K.A. has been working hard for a Bill for some time, and is now quite ready to combine with England in a move, and have published in the *Irish Bee Journal* the whole of my correspondence, which includes the letters from Lord Onslow and Sir Horace Plunkett's secretary, mentioned above.

In reference to what you say as to County Associations 'not giving a moment's thought as to the cost involved in securing an Act, nor deeming it in the slightest degree necessary to step in and bear its legitimate portion,' I would reply that the proposed Bill is now being drafted at a trifling cost, and copies will be shortly circulated throughout England and Ireland, and it will be introduced as a Government Measure.

Also, I would remind you that I wrote regretting the decision of the B.B.K.A. Council (which I am still quite at a loss to understand, and still hope they will reconsider), and that I intended to endeavour to get the County Associations to combine and pass an Act independently of the B.B.K.A., and this is just about to be carried out. Is the above consistent with what you write?"

We print below Lord Onslow's letter, but, as will be seen, it is addressed to the Irish Bee-Keepers' Association, and there is in it no promise of "passing" a Foul Brood Bill at all. As a matter of fact, Lord Onslow does not undertake to even introduce a Bill until he is shown "that County Councils would desire to avail themselves of the Act." Lord Onslow says:—

"In October, last year, the Irish Department of Agriculture received a Resolution from the Irish Bee-Keepers' Association on the same subject, in which it was stated that there was great increase of foul brood in Ireland. The Department agreed to communicate with the English Board of Agriculture on the question of the introduction of legislation. The proposals were in the direction of an adoptive and optional measure, enabling County Councils to take steps in their districts. At present there is no evidence before me, that if I were to introduce such a Bill, and pass it into law, it would be put into operation. The Association is a strong one, and I think, before I am asked to legislate, they should be in a position to show me that County Councils would desire to avail themselves of the Act. Several measures have been passed from time to time by my Department, which have proved somewhat disheartening, owing to the manner in which local authorities have treated them as a dead letter."

The letter of Sir Horace Plunkett's private secretary, after mentioning the correspondence with the English Board of Agriculture on the "foul brood" question, concludes as follows:—

"On the whole, the Department, for many reasons, consider it desirable to allow sufficient time to elapse to enable a judgment to be formed, as to how far the action at present being taken, by some local authorities, is likely to succeed in the reduction of foul brood, before further legislative powers are sought."

It is not for us to say what Irish County Councils may "desire" in the direction indicated; but, as regards England, we know that some County Councils have made it plain that they would decline to enforce the Act if it were passed. Not only so, but in this threatened action they

are in some cases supported by the County Bee-Keepers' Associations.

With all due respect for Mr. Lowther's being convinced, we venture to say there is a wide difference between introducing an Act and getting it passed, as we fear the present promoters will find out.

To say the least, they are a long way from the position attained by the B.B.K.A. Council some years ago, when, by dint of strenuous work and a liberal expenditure of time and money, they succeeded in arranging for a deputation representing the British Bee-Keepers' Association to wait on the President of the Board of Agriculture in May, 1895. This deputation was a somewhat memorable one for the British bee industry. It was introduced by the Right Hon. Sir John Gorst, M.P., and supported by leading Members of Parliament, nineteen of whom attended.

Indeed, it formed a representative body of prominent public men, such as it will not be easy to equal. Sir John Gorst did all he could to impress on the President of the Board the importance to the bee-industry of the movement, and the several speakers were accorded most encouraging signs of sympathy in the President's lengthy reply, which included a proposal for a small committee to be formed for consultation with the officials of the Board to see what could be done in the matter.

This was done, and for nearly two years the Council of the B.B.K.A. stuck to the task, making persistent efforts, involving the outlay of considerable money, in obtaining statistics and printing the same for distribution to County Councils and Bee-Keepers' Associations. With all this in view it is to be regretted that Mr. Saunders did not attend the meeting of the B.B.K.A. last month, to which he, along with all county secretaries, were specially invited. He would then have been able to get all his questions answered, and his vague notions with regard to inertness on the part of the Council cleared up. On the other hand, if he had taken the trouble to inform himself of what had already been done by the parent body he would have realised the difficulties to be overcome.

In conclusion, and in order to arrive at something beyond "suggestions" regarding what the B.B.K.A. should do, we venture to make a suggestion ourselves that has at least something practical behind it—viz., that our good friend Mr. Saunders make his promised effort in conjunction with all the county associations who are in sympathy with his commendable ideas, and in order to provide the "sinews of war"—for the obtaining of Acts of Parliament always will cost money—let the Cumberland B.K.A. undertake to guarantee a small sum (say, £20), and every other County B.K.A. a like sum, to provide the funds for enabling the work to be done. If this be agreed to, we think there will be no need to complain of any want of cordial co-operation on the part of the parent Association, nor will they spare either time or money in bearing their fair share of the burden. The B.B.K.A. Council are already in close touch with the Board of Agriculture, and will know when to move in the matter, when there is any prospect of success.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[5488.] *Shows and Showing.*—Thanks are due to the Rev. R. M. Lamb (5472, page 115) for his contribution on this subject; there are other successful exhibitors who have not yet given their views, and I trust that in the interests of bee-keeping in the future we shall have a full discussion. The time is now also very opportune seeing that our show committees will be arranging their schedules for the season, and no doubt will take note of the consensus of opinion expressed in the BEE JOURNAL. Personally, I believe that this controversy has almost solely arisen owing to the continued success of some half-dozen prominent bee-keepers who have during the last decade (or perhaps more) kept in the front rank at the principal honey shows as prize-winners; but, as Mr. Lamb observes in his second par. on page 115, if these were *non est*, what would be left?

As regards reducing the quantity of honey in each exhibit, those who have the quality will not object to this; it will save labour, save carriage both out and in, and with a small quantity of good stuff extend the limits of the enterprising exhibitor in those world-wide "open classes"; and with the same quantity needed for three shows he will be able to enter at six. On the other hand I grant it may induce a few more to enter the ranks of exhibitors. I have a schedule before me as I write, and note that with an entrance fee of 2s. 6d. the first prize is five shillings! Shall I enter? No, sir; the game isn't worth the candle, and I doubt not this would be the opinion of nineteen out of twenty bee-keepers. In

fact, no sane person would knowingly spend ten shillings for the chance of winning five!

I also agree with some of Mr. Lamb's points re the schedule of "Royal" Show; but in every phase of the show the idea is to attract "the best," and in view of the importance of the show every exhibitor will stage his best at the "Royal," and unless he has stuff of high quality there will be vacant spaces on the show-bench. No one with any knowledge of the requirements would send honey which he knew would not stand a chance of winning. Besides, most bee-keepers I know or have known do not belong to the monied class, and therefore will not waste their substance in useless attempts to attain success. Mr. Lamb would also make the "Dairy Show" the grand climax of the bee-year; but my somewhat extensive experience for a quarter of a century teaches—aye, and 'tis a fact well rubbed in—that very few winning dozens of sections at earlier shows would be in a presentable condition for staging at the "Dairy" unless others have been more fortunate in getting their exhibits about the country than myself. Then with jars of extracted honey. I do not know how others fare, but, speaking generally, if a dozen prize jars—say, from a June or July show—are allowed to stand for a month or six weeks undisturbed, incipient granulation will begin to show itself in maybe half the jars. The cause of this granulation is through the honey being sampled or tasted, some using one article to dip into the honey-jar, and some another. Now if this tasting was confined to one jar only, the loss would be of small moment, but when the bulk requires reliquefying the job takes time, and time is money. The same applies to the granulated class. If you wish to show at two or three shows you will require about a double quantity to fill up the "dug out" spaces. Possibly this is one of the penalties of prize-taking.

When we come to the "commercial" classes, it may be said that bee-keeping is on such a small scale in England that very few have availed themselves of this medium to reach the retailer. I believe that the ordinary show-bench and the work of the bee-keeping associations in the past have enabled those who want honey for retailing to locate the apiaries where it is to be obtained in bulk. I could mention many instances of inquiries for honey from dealers at a distance being sent to grocers who exhibited at the "grocers'" show, and the latter have handed these orders to me, though with my large and growing list of customers I have been unable to fill all demands or to promise to supply another season. If Mr. Lamb had read all I have said on "shows and showing," I do not think he would consider mine a "sad wail." If I wailed at all, it was for others. I have enough and to spare for myself, therefore no cause to wail; and as regards prize quality sections, we have despatched within the past fortnight many dozens, and have orders now to fill of other large parcels in coming week of stuff which is as good in every respect as when taken from the hives last June.—W. Woodley, Beedon, Newbury.

SHOWS AND SHOWING.

JUDGES REQUIRE EDUCATING.

[5489.] In the first paragraph on page 131 the reporter has unfortunately more than missed the point of my remarks. The facts were these. At a Royal Show held in Yorkshire a well-known judge took me round the honey department, and gave me his opinion on the exhibits. When we came to the heather class he showed me the exhibit which he considered "the best heather honey." On tasting it I at once differed from him, saying it was not from the true "ling," though a good mixture from bell-heather, brambles, etc. Then he asked me where I thought it came from. I replied, "Probably from Wales"; and he acknowledged that I had guessed right. So that the words, "It was 'ling' honey, and probably came from Wales" (attributed to me in the first paragraph) should be just the opposite, thus, "It was *not* 'ling' honey, *but* probably a mixture from Wales." As regards the education of exhibitors, I also stated at the conversazione how greatly I was indebted to the late Mr. Seagar (when he came to judge at "the Yorkshire") for the pains he took to explain the differences or defects in the exhibits. And I think his kindness was generally appreciated.

It would, of course, never do for every judge to try to satisfy every questioner. We must, then, leave to the discretion of each judge when to speak and when to keep silence.—Richard M. Lamb.

[Without knowing what our reverend correspondent had in mind when speaking, we assure him the words printed in our columns are reported verbatim. Moreover, we can personally confirm their accuracy, having heard them.—Eds.]

BEE STINGS AND RHEUMATISM.

[5490.] In reading some of the experiences given by bee-keepers in your "Homes of the Honey Bee," it makes one smile to see how often the writers have commenced by buying a stock of bees in a skep, etc. Bee-keepers begin on a larger scale nowadays; but I claim to have begun at the lowest rung of the ladder—in fact, my father even did not keep bees, and I knew nothing about them; but, being determined to become a bee-keeper, I, at the age of eight years, dug a hive of humble-

bees out of a bank and put them under an old tin box, and they worked there all summer, they becoming quite tame, and I was proud of them, but need not say that I did not require a honey-extractor at that period of my bee-keeping. The greatest trouble I have had in my real bee-keeping has been from stings. I swell a good deal when stung; and it does not look well to have your face looking like a pumpkin seen under a helmet. So to get rid of this unsightliness I caught bees and made them sting me on the arms and legs where the swelling could not be seen. In this way I soon became proof against stings. I also noticed that during this time I was freed from the iron grip of rheumatism, a complaint I had been a great sufferer from before my bee-stinging experiments. I did not know, however, how I had been cured until I saw a note on the subject in the B.B.J. 2. I enclose sample of wild flowers growing in the woods about here. Would you please say if it is a bee flower? It appears to be a wild anemone. If so, they come in at a fine time of the year for the bees.—H. P., Brompton, Kent.

[Flower sent is the common wood-anemone and useless to bees.—EDS.]

SHOWS AND SHOWING.

[5491.] I have read the letter on this subject with much interest, as I do a bit myself in honey production and showing, and it certainly takes a bit out of you after sending a dozen jars to a London show and they come back without a word of mention, and you are charged double fare for return carriage, as mine were last year. No wonder a bee-man like myself wants an extra amount of pluck to start another lot on such a forlorn hope. Nor can I agree with the proposed "buying in" of prize-winning exhibits; it would hit small bee-keepers like myself too hard and lessen entries very much, I think, as not giving a chance of taking advantage of his luck by showing them again. I think he is honestly entitled to all he can win with a good dozen sections, if he can get them from his own hives. But the dishonest exhibitor I detest; we are not free from them at our little flower show. The way we get rid of them is by disqualifying every exhibit they have in the show. This shows them up in a way they do not like, and they do not come again.—TOM SLEIGHT, Pilsby, April 4.

BUYING DISEASED BEES.

[5492.] Being a new reader of the B.B.J., I am taking the liberty of sending you a piece of old comb which I am afraid contains foul brood. I should be much obliged if you would give your opinion on the same through the B.B.J. The discovery was made through noticing bees from other hives "robbing" the stock in question. I examined to see the cause, and found the colony queenless, and, being anxious, I cut out the enclosed piece of comb. I should like to say here that I bought some 30 lots of bees this winter, and most of them have been neglected by their late owner. I am sorry to say I knew that the bees had not been attended to when I bought them, but had no idea that there was any disease about them, and as the weather was too adverse at the time for me to make a close examination I took them for better or worse; and if, as I fear it is, a case of foul brood, it may be all worse and no better, though I thought I had secured a bargain at the time. I now ask: 1. Is this a case of foul brood? Are my own bees in any greater danger of infection now than they were before? I have five lots before this purchase that I have had for several years, first in straw skeps, now in frame-hives. The new lots I bought I placed about 50 yards away from my own, but they were only about 400 yards away when on their old stands. One of my stocks (a strong one) attacked the hive that the sample of comb was cut from. Is that a cause of danger to the robbers? 2. What advantage could I get by being a member of the B.B.K.A? Can I insure my bees, and, if so, where and when and how?—A. W., Great Chishall.

[We regret to say you have made a disastrous purchase, the comb sent being badly affected with foul brood of old standing. You had better consult a competent bee expert, in view of the number of stocks involved. Write again if this meets your view.—EDS.]

SHOWS AND SHOWING.

[5493.] I have read with much interest the correspondence upon the above subject in your columns, but do not think the remedies suggested at all likely to obtain the results desired by many of your correspondents.

There seems to be an impression that "prize-hunting" is altogether reprehensible (that is, of course, outside your own district), the obvious fact that, to have any chance of success, "outsiders'" stuff must be really good being entirely overlooked. The educational value of having a high ideal set before us is also not sufficiently appreciated, although this is, to my mind, far above the value of the prizes won.

It seems to me that the true remedy is in our own hands; instead of trying to shut out "pot-hunters," we should say, "Let 'em all come," and then beat them by raising the quality of our own exhibits. In

(*Continued on page* 146.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

The experience of our friend Mr. Charity, whose apiary is seen below, has been acquired during trying times for most beemen, but he showed himself equal to the occasion when, in the spring of last year, things looked almost as bad as in 1902. He rose to the occasion, and by judicious feeding got his stocks into condition to take full advantage of the few weeks of bee-weather that favoured his county in June last. To be able to secure the harvest recorded from his four hives betokens some good results in a more favourable season than last. For the rest, the notes sent need no addition from us. He says:—

"I commenced bee-keeping as a hobby in April, 1902, with two skeps, purchased from a man in the village, who was giving up bees, and both skeps sent out a swarm the following July. The respective swarms were put into frame-hives, and when the bees had built out all combs and filled them with brood and honey, a rack of twenty-one sections was placed on each hive, but all they did that year was to partly draw out the combs in the sections, for when that was done we had very wet weather for a fortnight, and when it cleared up the honey-flow was about over; consequently I did not get any surplus honey in my first year. The following spring was also bitterly cold and wet here; consequently, when examined in March, the hives were found to be running very short of stores. I fed them with syrup until the middle of May, and by that time both the skeps and frame-hives were well packed with bees, and showing signs of swarming. Early in June the four hives sent out a swarm each, and all were successfully taken and put in frame-hives. They did so well that at the middle of June racks of sections were placed on each (my stocks now numbering eight). At the close of the honey-flow, I was rewarded by taking off 130 well-filled sections, and in addition five racks of drawn-out combs in sections. In view, therefore, of 1903 being known as a bad honey year, my harvest was not amiss.

"At the end of August I successfully drove the bees from one of my skeps, and put them into a frame-hive, the skep yielding me nearly two stones of honey. I was quite a novice when I first started, but at the outset I purchased a copy of the 'Bee-keepers' Guide Book,' and thoroughly mastered its contents. I also took the BEE JOURNAL every week, and to those aids, along with the help of Mr. Burchnall (an experienced bee-keeper of Deeping St. James), who gave me advice, I owe my success. I sold out of honey before the year ended, but the price obtainable here is low, 7d. each for sections, and the same price per lb. for run extracted honey. I hope to find a better market in 1904. I am a grocer by trade, and I have found bee-keeping a pleasant and interesting hobby. The figure shown in the photograph is that of my sister. The hives were all made by Mr. Howard, of Holme, and gave me every satisfaction."

MR. J. P. CHARITY'S APIARY, DEEPING ST. JAMES, LINCOLNSHIRE.

"*Shows and Showing*" *continued from p.* 144.

talking over this question with others, I find a general idea that situation and forage are the all-important factors; but my experience last year convinces me that the strain of bees is even more important in the matter of quality (I am not speaking of quantity). For several seasons I have admired the beautiful honey staged at our local show by exhibitors from other districts, and at last resolved to try what a change of breed would do for me, so in 1902 I introduced an Italian queen into one of my stocks of black bees. The honey they produced last year was of a totally different character from that from the hives standing alongside, and took an easy first in local class at our Henbury Show; whilst in the open class for single section I was second, Mr. W. Woodley being first. I was prouder of that second than of being first locally, as showing that I was on the right track.

Rouse up, ye "disheartened" and "disappointed" ones! Improve your stocks, and that success will surely attend your efforts, without any "boycott," is the firm conviction of—E. Meare, Henbury.

QUEEN-REARING IN ENGLAND.

By F. W. L. Sladen, F.E.S.

(*Continued from page* 139.)

BREEDING FOR IMPROVEMENT.

Improving Our Bees.—The fact that we are unable to decide exactly which drones shall meet our queens does not seriously interfere with the improvement of our bees. On the other hand, it prevents in-and-in breeding with its evils. Suppose, for instance, an apiary of fifty colonies is kept with a view to breed the best strain of bees for profit. Suppose that in the first year fifty queens of a certain superior strain are reared, also a number of drones of another superior strain for the purpose of fertilising the queens. Perhaps thirty of these queens will produce workers of the desired cross, the remainder of the queens being fertilised by drones of other strains. In selecting his breeding queens the following year, the bee-keeper will, as before, be careful to pick out those whose colonies show the most good points. If there was no flaw in his previous year's judgment, it will probably be confirmed by his obtaining his best queens from among the thirty correctly paired ones; but should his judgment have been at fault, one of his best queens may be found among the twenty mis-mated ones, and thus he will draw good blood into his strain that it would have been impossible to have obtained had all his queens been fertilised with drones of the selected strain. If the bee-keeper breeds queens and drones from his best colonies year after year, not only will his own strain keep growing better, but all the bees in his neighbourhood will in time be improved by his work.

The larger the apiary and the longer the work is carried on in the same locality the greater are the facilities for developing and maintaining any particular strain. In rearing the best queens careful and constant testing and selection are quite as important as good methods of rearing. Success, of course, depends on the care and skill of the breeder.

The summer climate of these islands is exceptionally cool, cloudy, windy, and damp for a bee country; the days are long and the honey flow uncertain and often of short duration. Such a climate affords an excellent test for selection. In the more exposed districts, although fewer fertile queens can be produced, they can be of the highest quality when the harmful effects of natural in-breeding have been overcome.

Best Races of Bees.—Although many successful bee-keepers use only the native black bee, its profitableness is certainly increased by crossing it with other races the queens of which are more prolific. Some of these races are very good-tempered and prettily coloured.

The best-known of these foreign races is the Italian (or Ligurian) bee, a native of the mountainous regions of Northern Italy and Switzerland. The British black bee has already been so much crossed with the Italian bee, that there are now few places where the former can be found in a perfectly pure state. Italian queens are particularly prolific from May to July, and colonies of Italian bees are more populous than those of blacks. Under manipulation pure Italian bees are less inclined to sting than blacks, and they remain quietly on their combs, while blacks rush about excitedly, and often take wing. Pure Italians are therefore easier and pleasanter to handle, and the queens can be found more readily. Italians will bear division into a larger number of nuclei than blacks, and this alone makes them invaluable in a queen-rearing apiary. Blacks, however, build more numerous and larger queen-cells than Italians; consequently, blacks should be employed for this work. Italian queens reared by black bees are generally larger than those reared by Italians themselves. Italians work on certain flowers, notably the red clover, that are not much frequented by blacks, and the wax-moth larvæ do not flourish in their combs.

Italian bees have the basal portion of the abdomen more or less of a semi-transparent orange-yellow colour, and several of the segments bear well-marked bands of short white hair. In America several good strains of Italians are reared by

queen-breeders, and in most of these the queens have the abdomen more extensively coloured yellow than queens imported from Italy and Switzerland, which, however, vary very much in this respect. In some American strains the whole of the queen's abdomen except the extreme tip is clear orange-yellow, and the scutellum is often yellow also. When these Golden Italian queens—as they are called—are fertilised by drones of equally yellow strain, very handsome workers are produced having the basal three segments of the abdomen clear orange-yellow and the fourth and fifth segments more or less yellow.

By rearing pure Italian queens from a good imported mother, and allowing them to become fertilised with local black drones, very strong colonies of good working bees are obtained. Still better results are to be obtained by pairing queens from selected crossed colonies. In a large apiary a first-class strain can thus in time be built up, which will well repay the queen-breeder for his trouble.

In my own apiary (a very exposed one) the crossed bees have proved superior to blacks in many ways. They have dwindled less in the spring, shown better honey-gathering results, and, tested in a badly-diseased apiary in Ireland, they were found to be better able to resist foul-brood. In many apiaries in America Italians only are kept and bred, and they are preferred to the crossed bees. The American Italians, however, though very brightly coloured, have probably a little black blood in them, the bright colour partly resulting from the breeders' constant selection of bright-coloured bees. Crossed bees that are more black than Italian are sometimes found to be more inclined to sting than blacks or Italians. This is, however, a fault that can easily be bred out, as I have proved in my apiary. Crossed bees that are more Italian than black are naturally almost as good-tempered as pure Italians.

Carniolan bees, from Carniola (a small and mountainous province in Austria), have the bands of short white hair well developed like Italians, but the ground-colour is generally entirely black. Carniolan bees are extremely good-tempered, and colonies can be examined without either smoke or veil; they are quite hardy, and good honey-gatherers, and the queens are fully as prolific as Italian queens. Carniolan bees are a good deal inclined to swarm, but with good management this tendency can be held in check.

Cyprian bees are uncertain in temper and require careful handling. Tested in my apiary, Cyprian bees reared so much brood after the honey-flow, that very little honey remained for wintering, and they dwindled more in the spring than any of the other races that have been mentioned. These undesirable features showed themselves after crossing with Italians and blacks. Cyprian bees more readily develop fertile workers than the other races mentioned, a particularly troublesome tendency in a queen-rearing apiary. In consequence of the above faults I have decided not to breed Cyprian bees in my apiary.

By breeding queens from colonies that do not swarm we may reduce the swarming tendency. In the writer's experience, Italian queens that have been bred for many generations in this way show marked disinclination to swarm compared with ordinary black bees.

(To be continued.)

Queries and Replies.

[3361.] *Confining Bees in Bad Weather.*—My bees fly strongly on very unfavourable days, and I fear many are lost. Will you kindly inform me if there is any objection to fastening the bees in with perforated zinc, under the following conditions?:—March 24.—Stocks strong, with capped brood and eggs (not in patches) on three frames in each, with 15 to 20 lb. stores. Reduced from ten to six frames. Four frames of stores behind dummy—to which bees have access. Every few days some cells on these are uncapped. I know that when breeding bees require water this could be supplied from a Raynor feeder. There are many cells of pollen in brood nest, and also behind the dummies. I can give my stock every attention, and on suitable days could release them. —I send name for reference, and sign, CUMBRIAN, Keswick.

REPLY.—Bees should never be confined to their hives in what is known as "flying weather," particularly when feeding or uncapping stores for stimulating breeding in spring.

[3362.] *Making Artificial Swarms.*—Kindly answer the following questions:—I have a stock of bees, purchased last season, in a frame-hive. The bees had eight full frames of stores left for food in October. I recently peeped in and noticed a little food left uncapped. During the winter I have constructed another hive, and I am desirous of making an artificial swarm as soon as possible this year. 1. Do you advise me to commence feeding gently at once to promote breeding? I do not think they have made much progress yet; the weather has been unfavourable. 2. By feeding continuously, with ordinary weather, should I be able to make the swarm about the first week in June? 3. I have four worked-out combs in frames

by me, and each of my hives will hold ten frames. Should I give my old stock two of them, and two to the swarm, or give the stock two new frames with foundation, and reserve the four combs for the swarm? F. A. PEET, Hertford.

REPLY.—1. We strongly deprecate the making of artificial swarms by inexperienced bee-keepers. On the other hand, if you decide to try this method of increase, follow closely the instructions given in Guide Book. All details are there given. 2. The date of making swarms is determined by the readiness of the hive for swarming, and the weather, which latter must be settled and warm. 3. Any spare combs should be given to the swarm; the old stock will not do much comb-building after removal of its comb-builders in shape of bees.

[3363.] *Securing Straight-built Combs.*—What is the secret of getting perfectly straight combs built? I suppose it is possible to do this, as we are constantly being told—*vide* Mr. Sladen's letters and elsewhere—to move frames of comb from one hive to another. Personally, I have, so far as I know, never had a hive in which it was possible even to transpose the combs, let alone to intermingle them with those of another hive; there is always a hollow here and a lump there which makes interchanging impossible. I always level the hives with a spirit-level before hiving a swarm, and I generally use full sheets of foundation, "wired in" by the maker of the frames. I also find many of the frames themselves "wind"—i.e., all four corners are NOT in the same plane, and when one does that it is closer at some portions to the next frame than it should be. I send name for reference, and sign,—EAST KENT, April 5.

REPLY.—Experienced bee-keepers have little difficulty in securing straight combs which are interchangeable with those of any hive in the apiary. If, therefore, yours are not straight after using full sheets of foundation properly "wired," there must be a fault somewhere, but where we cannot say. Frames also sent out by a reliable maker should hang true and square, so that the only need is to adjust the hive level on its stand. The rest comes merely from learning the art of bee-keeping.

[3364.] *Buying Diseased Stocks of Bees.*—At "Golding's," near Horsham, we have a number of hives (about 20 or so), and we understand that disease has broken out among the bees. The man who attended to them has lately left, and his successor knows little or nothing about them, so this may or may not be true. Will you kindly suggest the best thing to be done? Perhaps you could recommend some one to make an examination and report. The hives belonged to a gentleman now deceased, and we are anxious to dispose of them at once.—S. L. P., London, S.W.

REPLY.—The only thing we can suggest is to enlist the services of a competent man to examine the hives and advise as to what should be done. We will send name of one if desired. It would be little short of criminal to sell the hives if diseased. They would be dear at a gift to any bee-keeper.

[3365.] *Using Infected Hives.*—Being a constant reader of your journal I shall feel much obliged if you will let me know by letter if the enclosed sample of comb is infected with foul brood, as I have lost my bees in this particular hive? The bees seemed active in February, and had plenty of candy left. Last week I examined the hive and found the queen and half a dozen bees only, and last night all had perished. Will you kindly let me have a brief line of reply per return, as I am desirous of purchasing some Carniolans and putting them in this hive if not infected?—G. H. B., Bowes Park, London.

REPLY.—Comb is badly affected with foul brood of old standing, consequently all contents of the hive should be burnt and hive thoroughly disinfected before using again.

[3366.] *Bees Transferring Themselves.*—About May last year I obtained three skeps of bees, and placed them over frame-hives that they might transfer themselves, according to pp. 140-141 in the "Guide Book." I left the skeps on to be filled with surplus honey. However, the weather was very bad, and though I tried one with a super-clearer the bees refused to leave their skeps. So it came to pass that the thin skeps have remained over the frame-hives to this day. I wish to ask what I had better do. Shall I drive them, or what would you advise? The colonies seem healthy and strong, and I am feeding them. Thanking you for former kindnesses,—NEMO, Kent.

REPLY.—Leave skeps on the hives and hope that a better season than that of last year will ensure the result aimed at.

[3367.] *Supering and Doubling.*—Would you kindly advise me as to whether it is recommended to super with sections or shallow-frames, after having doubled a hive by putting another hive with five frames of brood and five of foundation on top of it? I take it the excluder zinc would be placed between the upper hive and the sections or shallow-frames. Please answer in your journal. I send name for reference, and sign,—T. H. F., Canterbury.

REPLY.—Hives worked on the doubling principle for extracted honey are not usually supered with sections. Indeed, it frequently happens that the one set of standard combs in upper story is sufficient for all purposes, being extracted as often as filled and replaced when empty. Yes, excluder zinc is used between brood and surplus chambers.

[3368.] *Erratic Egg-laying by Queens.*—On looking in one of my frame-hives to-day, I came across cells with two or three eggs in each, and very few containing only one egg. I may say I have from twenty to thirty stocks of bees, all in frame-hives, but I never saw such a thing before. May be it is on account of the stock in question having an old queen, as she is now six years old? I may also say that one of my strongest stocks has become queenless, and as I thought of trying a Carniolan queen, would it be advisable to get one and introduce her to the queenless lot? I am a reader of your B.B.J. and find most useful things in it. Thanking you in advance.—T. A. STANLEY, Evesham, April 9.

REPLY.—The stock first named is evidently headed by an old, worn-out queen, and in consequence needs re-queening. If the bees are strong enough to be worth purchasing a queen for them, you may do as proposed, but the bees will be mainly old, and probably not numerous enough to be worth re-queening.

[3369.] *Queenless Stocks in April.* — I have to-day looked into my hive, and cannot see either a queen or brood. There is a nice lot of bees; they have plenty of stores; there are no drones. Some of the bees are carrying in pollen. I have only this one hive. Will you kindly tell me if I can do anything to save them?—"MEL ROSÆ," Isle of Wight, April 9.

REPLY.—If bees are strong enough to be worth re-queening the only course is to purchase a fertile queen and introduce her.

[3370.] *Queens Reared in April.*—On March 26 I examined one of my hives and had the misfortune to kill the queen, and on again looking at them on the 9th inst. I found they had started queen-rearing. I saw four or five queen-cells, some of them sealed up; but, as there are no drones yet, I ask what will be the best thing to do under the circumstances. I shall be glad for information in next issue of B.B.J. I send name, etc., and sign—F. D., Somerset, April 11.

REPLY.—Leave the stock alone till it is seen whether or not a queen is reared and fertilised in course of time. The point will be to see that the stock is headed by a fertilised queen, which will be seen when brood is sealed over. If worker brood is found all will be right.

CHESHIRE B.K.A.

ANNUAL MEETING.

The annual meeting was held at Clemence's Café, in Chester, on Monday, March 21. There was a moderate attendance of members, over whom the Rev. T. J. Evans presided. The report, which had been previously circulated, was adopted. The financial condition of the Association was shown to be satisfactory, the balance in hand being £46 6s. 2d. The number of subscribers for 1903 was stated to be 344. The experts, Messrs. Waddell, Eaton, and Venables, had visited 407 apiaries containing 1,685 hives. Seventy apiaries had been found to be affected with foul brood. Three members have obtained third-class experts' certificates. Fifty-three members had paid premiums under the B.B.K. Association's policy of insurance for the year ending July 31, 1904.

The President, his Grace the Duke of Westminster, the Vice-Presidents, and the Committee (with one exception) were re-elected. Mr. T. D. Schofield and the Rev. E. Charley were reappointed Treasurer and Secretary respectively.

At a subsequent meeting of the Committee the Rev. T. J. Evans, M.A., was elected Chairman for the year, and Mr. R. S. Lerinell was appointed Assistant-Secretary in place of Mr. A. P. Smith, whose death at an early age was much regretted.

Messrs. Waddell (Northumberland), Eaton, and Venables (Cheshire) have been again engaged as experts.—E. CHARLEY, Hon. Sec., Ince Vicarage, near Chester.

NORTHUMBERLAND AND DURHAM B.K.A.

ANNUAL MEETING.

The annual meeting of the above Association was held on Saturday, March 26, in the Y.M.C.A., Blackett-street, Newcastle, Mr. G. J. Weighell, of Stocksfield, presiding. There was a good attendance of bee-keepers.

Mr. James Waddell (Secretary) read the tenth annual report and balance-sheet, which stated that the year of 1903 might be set down by every bee-keeper as one of the poorest on record. Their expert had visited over 200 bee-keepers, owning nearly 1,000 frame-hives and skeps. The insurance scheme had been favourably received, and an increased number of hives had been insured. Notwithstanding the poor season new members had joined the Association.

The financial statement showed a balance in hand of £3 9s. 5d., and this was considered very satisfactory considering the small returns received by bee-keepers generally. The report and balance-sheet were adopted. Subsequently the Secretary (Mr. J. Waddell) gave an address on "A Good Hive."—Communicated.

PARLIAMENT AND FOUL BROOD.

The following question was put to the Chief Secretary for Ireland in the House of Commons on the 29th prox.:—

Mr. Boland: I beg to ask the Chief Secretary whether the Department of Agriculture has received any further representations from public bodies or private persons interested in the bee-keeping industry with a view to checking the disease of foul brood in bees; and, if so, can he say what steps will be taken to carry out the proposals?

The Chief Secretary said no further representations had been received. The Department was still of opinion that its scheme of instruction in bee-keeping should have an adequate trial before the question of taking additional steps by legislation could properly be considered.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of March, 1904, was £3,113. — From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 7 to 10, at Guildford. — Royal Counties Agricultural Society's Show. Bees, Appliances, and Honey Department, under the management of the Surrey Bee-keepers' Association. Twenty-one classes. Schedules from F. B. White, Hon. Secretary, Marden House, Redhill, Surrey. **Entries close May 14.**

June 21 to 25, at Park Royal, London.—Royal Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A. Increased prizes for B.K.A. Associations as arranged in divisions or groups of counties. Schedules from Edwin H. Young, Secretary, 12, Hanover-square, W. **Entries close May 2, or at extra fees up to May 16.**

July 14 and 15, at Grimsby.—Show of Honey Hives, and Bee Appliances in connection with the Lincolnshire Agricultural Society. Bee Department under the management of the Lincs. B.K.A. Fourteen classes. Liberal money prizes and silver medals. Schedules from R. Godson, Hon. Sec. Lincs. B.K.A., Tothill, Alford, Lincs. **Entries close June 14.**

August 4, at Kingsthorpe, Northants.—Honey Show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar of honey. (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Hon. Sec., Kingsthorpe, Northampton. **Entries close August 1.**

RAINFALL IN 1904.

FIRST QUARTER.

At Buttermere, in the county of Wilts. Rain gauge:—Diameter of funnel, 5 in.; height of top—above ground, 3 ft. 6 in.; above sea-level, 847 ft.:—

Month.	Total Depth. Inches.
January	5.53
February	4.40
March	2.01
Total	11.94

—W. E. BURKITT, Buttermere Rectory, Hungerford.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

GEO. ALLEN (Chellaston). — Bees and Flowers.—The article from "Daily Mail" on this subject was sent to us direct from the author, and appeared in current issue of our monthly, the RECORD, page 57. Seeing that the bee mentioned as visiting different varieties of flowers promiscuously did not refer to the hive or honey-bee, but to the "common humble bee," we did not think it necessary to make any comment.

Suspected Combs.

W. S. H. (Hereford).—Comb contains no brood at all, only hard old pollen, which will be removed by the bees if there is not too much of it.

"F.," Anxious (Leyton).—There is no disease in comb, though it looks suspicious. The queen, however, is evidently a drone-breeder, and consequently useless.

GEO. BARNBY (Henley-on-Thames).—Comb contains nothing worse than mouldy pollen, consequently there is no cause for alarm about the other hives. Where only a few cells are half-filled with hard pollen, the bees may be allowed to clear it out themselves.

ALEX. REID (Ross-shire).—Paint for Hives. —The paint mentioned on page 117 of our issue for March 24 will no doubt answer the purpose if used as directed.

Editorial, Notices, &c.

FOUL BROOD LEGISLATION.

We have been favoured with a further communication from Mr. Geo. Saunders, Hon. Sec. Cumberland B.K.A., complaining of the way in which his letter on the subject, headed as above, was dealt with in our leader last week. But, while in full sympathy with the object in view, the limitations of space preclude its publication just now. Some letters in type and waiting insertion were held over to make room for the article on page 141, and, having more matter in type than fills our space, we cannot do more in the same direction just now. Besides, the *Irish Bee Journal*, which has, we understand, been already supplied by Mr. Saunders to all county associations, contains a full report of the voluminous correspondence between the B.B.K.A. Council and himself, so that it is in the hands of those in authority, while anyone who cares to obtain a copy of the paper for himself can do so for a penny from the nearest newsagent. Thus the information we are charged with unjustly withholding from bee-keepers is without any real foundation.

It may also be well to draw Mr. Saunders's attention to the letter of "A Cumberland Bee-keeper" on page 154, as throwing some light on the question of unfairness with which we are charged in his latest letter.

On the other hand, we yield to no one in desiring legislative powers for dealing with foul-brood, nor can it be other than satisfactory to know that county associations are taking their turn in providing funds for carrying out the work. But we have no sympathy with action that begins and ends with calling on others to find the money. That is to our mind the practical and businesslike way of regarding the matter, so far as it has gone, and when Mr. Saunders has received replies from the county associations to whom his circular letter was sent, we will be very pleased to hear from him again.

REVIEW.

We have received from M. Ang. Gross, *La Loque des Abeilles* ("Foul Brood of Bees"), published by the author at Salvan Valais, Switzerland, price 1s., post free. This pamphlet of 47 pages is a very useful addition to the literature on foul brood, as it gives the author's experience with formalin as an antiseptic, and his deductions as to the causes which contribute to the production of the disease. He does not claim any special virtue in formalin over other chemical substances, which he admits can be used with equal success. Observations have led him to the conclusion that the true remedy for this disease consists in combating the various causes which conduce to weakening of colonies, and antiseptics and measures for preventing the propagation of the disease, although absolutely necessary where it has invaded an apiary or neighbourhood, are of relatively less importance.

According to the author's experience the following causes conduce towards the propagation of the disease:—

1. The numbers of so-called bee-keepers, who only visit their apiary for the purpose of taking what honey they can find, consequently leaving their colonies weak or diseased, and exposed for whole seasons to robbing from neighbouring hives. Frequently such hives have foul-brood already, and it is sufficient for a few in each county to make the disease endemic in a wide district, notwithstanding, the most efficacious remedies, and greatest vigilance of enlightened and true bee-keepers.

2. Multiplying colonies by making artificial swarms out of the natural swarming season. Thus producing weak queens and inevitable degeneration.

3. Abuse of stimulative feeding, either with honey or sugar syrup, and of all artificial feeding with substitutes for honey, which are not complete foods and do not contain the substances necessary for the rearing of healthy and vigorous bees, conditions which, combined with the intelligent care of the bee-keeper, allow them to battle successfully against the germ diseases to which they are liable.

4. A damp situation of the apiary, and placing the hives too near the ground, especially in positions where the free circulation of air is impeded.

5. Insufficient care or ignorance in examining healthy hives after diseased ones without disinfection of the person or appliances used as well as of the healthy hives.

After using formalin in various ways, he has found fumigation with a very weak solution efficacious. For this purpose an ordinary smoker is used, and the following is the way to proceed: Mix in a small vessel equal quantities of liquid formalin and water, sufficient to thoroughly wet a piece of rotten wood, or charcoal, the size being proportioned to the number of hives to be fumigated. This is placed on the red-hot embers in the smoker and covered with juniper twigs, leaves, or failing these, simply with paper. Vapours of water and formalin are generated, and fumigation is at once commenced, and rapidly proceeded with from hive to hive, each having from eight to 15 puffs of vapour injected into

it according to its capacity, the virulence of the disease, or the danger from contagion. The fumigations must not be made at the entrance, but through a hole, the size of nozzle of the smoker, bored at the back of the hive in the centre close to the floor-board, and this should be corked after use. If the hive is very full of bees care should be taken not to blow too vigorously, otherwise those on the bottom of the frames would run the risk of being killed. Formalin thus diluted and used judiciously, and in moderation, does not appear to injure the bees.

Hives having foul brood in an advanced stage, must have all combs containing brood, as well as those that have been bred in, and hold the dried pellicles of larvæ in them, destroyed. These pellicles contain the spores which it is very difficult to kill. The other combs with the bees are transferred to disinfected hives and fumigated every evening for about three weeks, after which the frequency of the fumigations may be gradually diminished, but they must not cease entirely, at any rate during the first year. In the earliest stages of the disease when a larva here and there only is affected it is not necessary to remove the combs; a fumigation every evening would be sufficient to restore a colony to a healthy condition, provided it is kept warm, and the bees well crowding the combs. All colonies, both healthy and those diseased should be fumigated. The operation does not take long as five to six minutes suffice to do 30 hives.

We have given the outline of the method of treatment but the author goes very fully into the different phases of disease, and the management of colonies in varying conditions. There are chapters treating of the various ways the disease is propagated, on the degeneration of colonies, disinfection of hives, the dangers attending artificial and stimulative feeding, and concluding with sound advice, he says: "All of you bee-keepers who desire strong colonies, with healthy and vigorous populations, do not commence by weakening them yourselves, by imprudent and unreasonable manipulations, and by giving them an incomplete and often unwholesome food. The terrible foul brood would then easily get the mastery of these already exhausted colonies. Let the strength, vigour, and hardiness of the bees be your constant aim, and to attain which you must not forget that honey and pollen, which the bees have themselves collected is—so far as at present known to science—their only complete food, the only one which constantly and exclusively used, gives them health, vigour, and hardiness, in a word, the only food that really suits them." Those who wish to study the subject more fully should procure the pamphlet from the author.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

THE GREAT AWAKENING.

[5494.] The air is once more heavily laden with the murmurous hum of insect life as each separate type issues from the close and circumscribed space where, for the greater part of half a year, it has quietly and peacefully contented itself with a state of inert existence, aware from the instinct implanted in its cranium from the first dawn of creation, that there is a time to work and a time to sleep, or at least for taking a rest as if in sleep. Our friends the bees have been quietly clustered round the narrow precincts of the winter hearth, and no audacious bee has ventured to go a-roving when the temperature teaches it, in its prescient wisdom, that no flowers bloom, and that no nectar is to be had all the country over. Far-seeing, therefore, the whole as one unit laboured to furnish that one spot, where all their pleasures and comfort are for the time centred, with the requisite store, during the balmy days of the by-past summer, so that now and for some time necessity uses no compulsion in sending them abroad in unseasonable times. Hereditary instinct teaches each successive generation that winter follows summer, and so each line of lineal descendants store a supply of accumulated riches to tide them over the period of inertia.

Winter passes, and the first dawn of change from winter's rigour sees them waiting in suppressed eagerness for the auspicious moment when the balmy breath of spring's first mild and ethereal airs will call in some mysterious manner to their instinctive faculties that the flowers are unclosing their gay blossoms, and silently inviting them to sip from the hidden springs where the very essence of the bloom lies; and the bee, responsive, hastens to sip of the proffered nectar. The advantage is reciprocal, and the visit conveys a double blessing—blessing it which gives and she who takes—for the flower bestows on the bee her very soul, and the bee in return conveys to the plant the elements of future life, in the pollination of its seed-blossoms, which require this cross-fertilisation to fructify them.

So at the voice of spring, and in response to her floral offering, the members of Apis mellifica are once more proving that they are rightly named the Busy Bee, and the air is redolent with sound and scent. The murmur of a very great multitude of bees is heard engaged in active work, breaking the intense stillness of the balmy air with the suppressed sound of thousands of diaphonous wings, eagerly bent on profiting by each shining hour. And the air is heavy with the sweet perfume of their richly laden burdens. Scent and sound seem to pervade the whole ambient atmosphere, as if both were a part of it, and the murmurous melody blends with the gentle zephyr, gladdening the heart and ear of every true bee-man. The bees in their wisdom should teach us a lesson, for they have learned how to look at the recurrent galaxy of all this floral loveliness, and have discovered that "Nature never did deceive heart that loves her." So they pour out of their hives in gay abandon, glad at the joy of a new birth.

This great and mighty army of insect life, wakening up to a new existence, is not confined to the Hymenoptera, but includes Diptera, Lepidoptera, Hemiptera, and even Aptera. All of these deserve careful study and observation, but at present I would advise special attention being given to two or three close relations of our hive-bee. Very soon we shall see a solitary bee flying about, not very distinctly different from the hive one. Watch it for some time, and the chances are that it will light on some rose-bush or other similar plant, and, with its powerful pincers, neatly cut out a part of the leaf, which it at once proceeds to carry away to some burrow in a bank or the garden walk. If quietly followed, she will be observed to enter a small hole, where search will allow you to see that she has built a rude dwelling, or rather something in the form of rudimentary cells. There she deposits a single egg in each division, placing food round it, and closes up with some more pieces of leaf. Each one of these fragments seems to be cut out on some special design, showing at least the rudimentary elements of forethought. Another feature deserving attention is that this Megachile has no sting, so that its similarity to the hive-bee is a wise provision, saving it from many a deadly enemy. The females of this class alone survive the winter, and, being fertilised the previous season, after a period of hibernation begin to found a new home and rear a new race each successive season.

Another of the Osmia may be followed to some rotten tree, post, or hollow branch, where you will find her nest, as if it were in a tunnel or tube. She begins her egg-laying at the bottom of the hollow space, putting food round it when she seals it with wax. On top of this she constructs another cell, and so on till she has filled the tunnel. Generally the space is so narrow that the first hatched has to wait patiently until the last deposited works its way out, when a clear passage is left for the exit of all below.

Another kind get the name of mason-bees from the fact that they frequent old walls and there build mortar cells of a rude order. About this time of the year, if you have noted their habitat, you can dig them out, placing them in proper receptacles, and watch the process of metamorphosis until the month of May, when they emerge from their mortar home, provided by their parent, by opening up a round hole with their powerful mandibles, which act as a scissors to cut or a file to pierce the opening through which it can emerge, much as our hive-bees eat their way out of their wax-covered cells. Who will study one or other of these classes, and give us of the fruits of their observation?—D. M. M., Banff.

JUDGES AND JUDGING.

A FEW WORDS ON COLONEL WALKER'S PAPER.

[5495.] In making a few remarks on the above subject, allow me to say that I speak from over twenty years' experience of both bee-keeping and hive-making, having kept bees in the extreme North and South of England, and also near the famous North York moors, where I took my bees to the "ling" for several years. Referring first to the use of a $3\frac{1}{2}$ in. square of glass for testing the comb-surface of sections, may I point out that the size named will only suit the $4\frac{1}{4}$ by $4\frac{1}{4}$ section, but if the width of lace edging to $\frac{3}{8}$ in., it will need tall sections or those of any other size. Again, I would draw special attention to the fact that, although a professional man (from which classes our judges seem principally to be drawn) may be a good honey judge, a good bee-keeper, and be well up in theory, it by no means follows that he is a competent judge in the "Hive and Appliance" classes. On the contrary, I have no hesitation in affirming that a man who is not a thoroughly good hive-maker—implying technical knowledge which years of experience alone can give—is not, no matter what his reputation as a bee-keeper may be, a competent person to undertake the judging of hives, etc.

Yet, in spite of this—will any one outside the ranks of bee-keepers believe it?—these same professional men are appointed year after year to judge, not only the honey and wax classes (which is admissible), but also the hives and appliances,

duties for which their life's work and training in no way fit them.

Turning now to the honey and wax classes, I cordially agree with most of Colonel Walker's remarks regarding honey, but think he is "all at sea" on the question of wax. Why, I ask, should the purest wax be tabooed? Why is it desirable that first-class exhibition wax should contain "natural" impurities—to wit, pollen and propolis? Is the light-coloured honey, which so often carries off first prizes at our best shows, any more typical-coloured British honey than pure wax from cappings is typical-coloured British beeswax? The finest quality of wax is obtainable by every bee-keeper who produces a fair quantity of extracted honey. The very light "amber" and "water-white" honeys are, apparently, gathered in only a few localities.

Colonel Walker thinks the "aroma" of wax is derived "mainly from propolis." I consider this is a mistake. Take "heather" wax, for instance. Is not the aroma derived undoubtedly from the honey? A few years ago, Mr. Chas. Dadant, of American comb-foundation fame, mentioned that while melting up a consignment of wax from an orange-growing district, the whole building was filled with the delightful odour. Can there be a doubt but that the aroma came from orange-blossom honey?

I notice that Colonel Walker would allot 30 per cent. of marks for aroma. Is not this far too much for a property which surely has very little commercial value?

Passing on to the Trophy class, the Colonel says he should be glad to see floral decoration abolished. I would deprecate the too profuse use of flowers on or about a trophy of honey, but, at the same time, see no reason for excluding their use altogether; for what, in the name of decoration, can be more charmingly appropriate than a few lovely blooms disposed here and there about an exhibit of honey culled from those same or sister blooms? He must be sadly lacking in imagination who would exclude flowers from a honey show. —S. P. Soal, Rochford, Essex.

FOUL BROOD LEGISLATION.

[5496.] I am writing in reference to the editorial in this week's Journal on "Foul Brood Legislation." I am sorry to find that—judging from the tone of your article—it is generally understood that the members of the Cumberland B.K.A. are in accord with Mr. Saunders, the Hon. Sec., in his agitation for foul brood legislation. I am myself of opinion that this is far from being the case. The matter has not been discussed or voted on at any meeting of the members of the Association, nor has it been brought before a meeting of the Executive Committee. I think that until Mr. Saunders brings the matter before some sort of representative meeting of the Cumberland B.K.A., he has no right to push his own private views, which are much too advanced and much too costly for the general body of the bee-keepers of our county, who, it should be remembered, are for the most part working men.—A Cumberland Bee-keeper, April 16.

A HOME-MADE EXTRACTOR.

[5497.] You can bear me out, Mr. Editor, when I assure your correspondent, S. Darlington (5484, page 136), that I have no "axe to grind," and that my criticisms were bonâ-fide, and also for the benefit of anyone who might be tempted to try his hand at extractor-building, in the hope of getting a really good thing cheaply. I still maintain that much of the clover honey secured by numerous bee-men could not be extracted by your correspondent's machine. The sample of honey he sent you (mentioned on page 130) is, in your opinion, only "of fairly good consistency," and "not nearly so dense as some clover honeys." This opinion amply fortifies my assertion in regard to the efficiency of the extractor, or rather to its inefficiency.

My criticism of the "square spindle in a round hole" was, in your correspondent's opinion, "too previous." My answer is that he was professing to give instructions "how to make" an extractor, but nowhere in those instructions does he say anything about "rounding" the spindle, except at the bottom end; thus your readers are left to suppose that the spindle is to remain square.

In conclusion, I may add that I "did not expect 'S. D.' to describe how to make an extractor of the Cowan reversible type." Such information is not generally given away, and no reasonable person would expect to receive it gratis.—Pro Bono Publico, April 15.

BEE NOTES FROM YORKSHIRE.

[5498.] The winter in this part of Yorkshire has been unusually mild—no severe frost and very little snow; but for all that our bees have had long spells indoors without the chance of a cleansing-flight. I started winter with nine stocks and have lost two of them. One (in a frame-hive) had consumed all stores and died through actual want. The other (a skep) had about 5 lbs. of honey left; but, on closely examining the combs to see what had caused the bees' death, I saw strong evidence of its having been affected with foul brood last season. I should have

passed it by unnoticed had I not been on the look-out, for the cells seemed empty. I noticed a live drone in another hive (the one I have given you some particulars of the last two years) at Christmas. I have since found on examination it is queenless. I examined a hive for a friend a week ago; this hive was in a very prosperous state, but had a rather serious check through a sharp frost we had at end of February. There was at that time brood in plenty in all stages; but several seams of bees had got separated from the stores of food, and died from cold and hunger, consequently breeding had been almost stopped; but it has now commenced again vigorously, and no doubt this stock will give a good account of itself later. A good batch of drones had been reared, and looked strong and lusty, so that they will be flying abroad on the first warm day. There are hundreds of young lime-trees in Harrogate; but for four years we have only had just a trace of lime honey from them. I wonder has this failure been general throughout the country, or is it that we are too high above sea-level for limes to yield? Harrogate is not a very good honey-producing district, as your readers will have noticed by the results I sent you in November last (page 456) from the hive I weighed daily. Hoping we shall all have a better season in 1904.—Geo. Duffield, Harrogate, March 26.

BEES AND HAZEL CATKINS.

[5499.] As a constant reader of the B.B.J. for the last twenty years, I am as glad of its advice as ever. My attack of the fever for bee-keeping is of old standing—in fact, there is no cure for the disease (if it be one), which has such a strong hold of me. I was much interested in the letter in B.B.J. of March 31 (5478, p. 125) headed "Bees and Hazel Catkins," and, as an old bee-keeper, I can prove that bees do work on hazel catkins, as stated by your correspondent, "J. R., St. Albans." I have the management of an apiary belonging to a lady bee-keeper, and in the kitchen garden there is an avenue of filbert trees in rear of the hives, and the lady, along with myself, has seen thousands of bees working on the catkins in some seasons. The only drawback is that the catkins usually bloom too early for the bees to take advantage of the catkins for pollen. This present spring, for instance, the weather has been all against the bees here in Mid-Yorkshire. It has been cold, and all against bee-work. But I do not see any cause for grumbling at this, seeing that last spring promised so well, and yet the season turned out a very bad one for honey. There is every reason to believe that 1904 will be a successful one for bee-keepers. It is fully six weeks later than last spring, and the bees now have everything in their favour. All the bee flowers have to bloom yet, and this points to a grand time. For myself, I am getting everything ready, and my advice to all brother bee-keepers is: Do not neglect starting work without delay. We shall be busy enough shortly, so be in time. I send name and address for reference, and sign—A Lover of Bees, Mid-Yorkshire.

BUYING DISEASED BEES.

[5500.] It appears from your footnote to my letter on page 144 that I have entered upon a serious business in buying diseased bees; but being only a novice at bee-keeping, I did not think my case so bad until I got your opinion as above, and also saw your reply to query 3364 (page 148) in same issue. As my case is a serious one, and needs attention at once, will you be good enough to send a word of reply by return post, giving me the name and address of a bee expert whom you can recommend to help me? Also a few hints as to how I can obtain his services? I am a working man, and have to study expenses. I shall be greatly obliged if you will assist me at your earliest convenience.—A. W., Great Chishall.

[We were glad to suggest the name of a suitable man as desired, and need only add a line to say that the action taken by our correspondent was by far the best he could adopt.—Eds.]

ABSCONDING SWARMS.

CLAIMS TO OWNERSHIP.

[5501.] I should like to know your opinion, and if possible the opinions of some of your correspondents, on the following anecdote:—We had, last summer, a swarm come out about 9 o'clock one Sunday morning. The bees settled upon a high apple-tree in our garden, and remained there till 12 o'clock, when the whole swarm took flight again, and flew straight to a hive of one of our neighbours. The swarm was not lost sight of, but was followed and seen to enter a hive which I think must have been empty at the time but left open, otherwise there would have been fighting, of which none took place. Our neighbour took advantage of this, and said to the person following, "There, now, how shall we part them?" as if he had a right to claim the bees. Would you oblige me by saying:—1. Whether a swarm would go in hive that has an old stock in it? 2. Is there any law by which we could have claimed them? 3. How could I have shown the man there were two lots of bees in the hive upon examination? Trusting this will be a help to other bee-keepers

who may have to experience similar circumstances, I send name for reference.—F., Welwyn, Herts, April 11.

[1. Yes, quite readily. 2. Not in your case, the bees having joined up with those of another man's hive. You must put up with the loss unless the hive was tenantless at the time. 3. You could not do it. —Eds.]

PREVENTING SWARMS IN OUT-APIARIES.

[5502.] I keep some of my bees (three frame hives) a distance away from home, and am anxious to prevent them from swarming. I therefore ask: Do you consider the following plan advisable or likely to succeed?—When, or immediately before the honey-flow commences, to take from the two strongest stocks enough frames of brood to fill a second brood-chamber, and place it over the remaining stock, filling up the hives from which the brood is taken with full sheets of foundation, and supering them at once with shallow-frames with excluder between. I also propose to place a box of shallow-frames above the hive containing the two sets of brood-combs. It seems to me a more likely plan than simply giving the extra super-room without increasing the space for the three queens.

I had a glance at three of my stocks at home to-day, and found plenty of stores and brood on four and five frames each. I do not think I shall trouble to stimulate with syrup this spring, as it seems to me half the trouble is to build up these rousing colonies, and the other half to find out some plan to reduce them again to prevent swarming; so, after all, where is the advantage? All the attention necessary seems to be to assure oneself they are not short of food, and thoroughly warm and dry.

I should be very glad of your opinion on the swarm-preventing management I purpose trying.—W. Paris, Lewes, March 29.

[We see no objection to the plan proposed except giving shallow-frames to all three stocks after removal of brood from two and "doubling" the third. The last-named part of the plan should be deferred till the five new frames of comb are built out in each of the hives where given, and in the doubled stock till the upper story is well filled with bees. If this is done all should go on right.—Eds.]

OWNER'S RISK RATE FOR HONEY.

[5503.] As a regular reader of the British Bee Journal for some months past, I have perused with great interest the correspondence on carriage of honey by train. It is quite certain that honey is included in the list of articles carried at "owner's risk" rates, but comb-honey is carried in no other way than at owner's risk. I enclose herewith a copy of the L. and N. W. R. Co.'s scale of charges, which will be of some service to any bee-keeper needing rail rates. The list can be had on application by anyone. I send name, and sign—Beginner, Potton, Beds.

DO BEES FOLLOW A BEE-LINE HOME?

[5504.] In July last year, when working near a deep and wide railway cutting, I could see scores of bees on the wing following a straight line for my own house; but when they reached the cutting, instead of flying straight over it, they simply dipped down right to the bottom, this forcing them to mount the almost vertical bank on the other side. Had it been windy I should not have noticed them. Had the bees wished to follow the ground, there was a bridge on the right not forty yards away, and another to the left 100 yards distant. Besides, the cutting at that point is about fifty feet deep and 100 yards wide. I wonder if anyone has noticed the same thing over every little valley in hilly parts of the country?—Tom Sleight, Pilsby.

HOME-MADE APPLIANCES.

[5505.] As a constant reader of the B.B.J., I have always been greatly interested in the articles describing home-made bee appliances. The recent article on a home-made extractor I have read with interest, and as I am thinking of making a heather honey-press, I ask will some reader kindly give me a few instructions. I was thinking of making it on the principle of the "Rymer" press, which is said to be very effective; but I have not seen one of them. I send name, and sign—Heather, Echt, Aberdeenshire.

QUEEN-REARING IN ENGLAND.

By F. W. L. Sladen, F.E.S.

(*Continued from page* 147.)

Best Kinds of Bees.—The question as to the best race of bee to propagate is one about which some difference of opinion exists, and to which I have paid a good deal of attention. Certain climatic and other conditions are more favourable to some races than to others. In America, for instance, the Italian (or Ligurian) bee and the closely related American varieties of it are found to be the best bees for profit. In Great Britain the Italian bee is not held in such high estimation, and many bee-keepers even prefer the native black bee.

The black bees are so common that Italians can only be kept pure by constantly importing them from abroad. The black bee has, however, been greatly improved by crossing it with the Italian race, and there are now few places in the United Kingdom where the black bee can be found in a perfectly pure state. Italian queens are more prolific than black queens, and from breeding Italian queens and allowing them to become fertilised with local black drones a good strain results. Very strong colonies of good workers are thereby produced, and it has been found in Ireland—in my own experience—and elsewhere that such bees are generally more capable of resisting foulbrood than the ordinary black bees. The only drawback of such a cross is that the workers will sometimes use their stings under less provocation than those of either blacks or of pure Italians, but this is a fault that can easily be bred out. Individual colonies of either race differ considerably in all respects, and where selected Italians are crossed with selected black bees an excellent strain is obtained, which, with care, may be further improved, and will be found to reward the queen-breeder well for his trouble. Carefully-bred, cross-fertilised Italian queens of the second and later generations will often produce better workers than those of the first generation.

Several good strains of Italian bees are bred in America, the queens of which generally have a larger surface of the abdomen yellow than Italian queens imported from Italy and Switzerland, which, however, vary very much in this respect. In some American queens the whole of the abdomen, except the tip, is clear orange-yellow, and these queens often have the scutellum also yellow. When these golden queens, as they are called, are fertilised by drones of their own strain they produce very handsome workers, in which the three basal segments of the abdomen are clear orange yellow, and the fourth and fifth segments are more or less so; the scutellum is also yellow. These brightly-coloured workers are, however, somewhat less vigorous than those that are darker. When bred in this country and crossed with black drones golden queens produce good honey-gathering workers.

Carniolan bees have several good points. They are mild-tempered, hardy, and work well, and the queens are prolific. Their only fault is that they are too much given to swarming.

Cyprian bees are not recommended. Their uncertain temper is not their most undesirable trait. The workers are short-lived in our climate, and the queens breed so excessively, even in the autumn, that very little honey remains in the hive for winter. The workers are more liable to become fertile than those of the other races that have been noticed, a particularly troublesome thing in a queen-rearing apiary.

The fact that Blacks are better queen-cell builders than Italians has already been noticed. Carniolans excel in this particular. Of the races that have been mentioned, Italians generally construct the smallest number of queen-cells, and it is probable that any non-swarming strain that may be developed will be of this race.

Introducing Queens.—The introduction of fertile queens to colonies and nuclei is a common operation in the queen-rearing apiary, and one that is attended with more or less risk. Several methods are in use. The favourite one is to keep the queen caged in the hive until the bees have become accustomed to her. The majority of

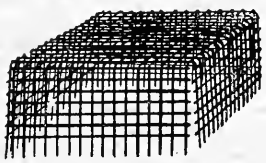


Fig. 8.—Simple queen-introducing cage for pressing into the comb.

bee-keepers use a dome-shaped cage consisting of wire-cloth soldered to a ring of tin, which is pressed into the comb. A cage on the same principle (Fig. 8) can easily be made from a piece of stiff wire-cloth (with about 12 wires to the inch), 2 inches square, by cutting half-an-inch out of the corners and bending down the sides so formed. It will sink better into the comb if two or three strands of wire are pulled off the edges.

A colony is in the most favourable condition for accepting a strange queen when it has been deprived of its own queen from one to three days previously. The new queen should be caged by herself, or with one or two just-hatched workers, on a tough portion of one of the middle combs, and the part enclosed by the cage should include one or two cells containing unsealed honey. In spring a caging of 36 hours is generally long enough, but in the autumn double that time may be necessary. After the queen has been liberated the bees should not be disturbed for four or five days.

Cages with mechanical arrangements for liberating the queen without disturbing the bees are sometimes used. With the "Miller" introducing cage (Fig. 9) the queen is liberated by the bees eating through a plug of soft candy. To lengthen the time of confinement a slip of pasteboard is tacked over the candy hole (d). The bees are made aware of the presence of

the candy by a pin-hole pricked in the paste-board, and they usually eat through both paste-board and candy in about 24 hours. The queen is inserted in the cage

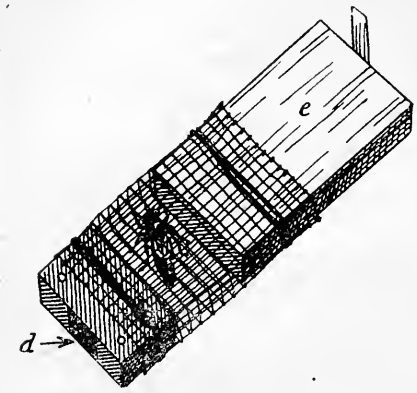


Fig. 9.—Miller's introducing cage: *D*, hole for candy; *E*, block which is removed for inserting queen.

by removal of the wooden block (e). This cage is made thin enough to be slipped between the combs.

A simple method of queen-introduction, first described by Simmins (Sussex) is frequently, but not always, successful. The queen is kept by herself without food in a cage which has not contained another queen in a warm place for half-an-hour. She is then allowed to run in under the quilt of the hive. The work is best done at dusk.

A strange queen will be readily accepted by bees that have been separated from their queen and brood in one operation, when, after a few hours, they have become aware of their condition. A virgin queen several days old will even be accepted by such bees, but she is likely to be destroyed as soon as any brood is given to the bees. This method of introduction is not suitable for general use.

Sending Queens by Post.—The postal regulations of the United Kingdom and of

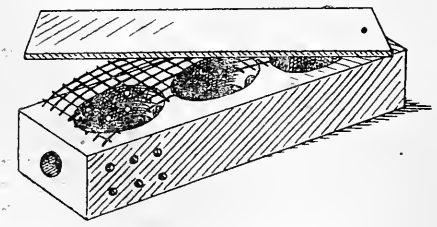


Fig. 10.—Travelling cage.

most other civilised countries now allow bees to be sent by sample post, and a considerable number of queens are distributed in this way every summer. They travel well in what is known as the Benton travelling cage, the usual form of which consists of a block of food 4 in. by 1¼ in. by ½ in., with three holes of about 1 in. diameter bored in it (Fig. 10). The holes are connected by a smaller hole of ⅜ in. diameter, which is bored through them. The large hole at one end is filled with a special kind of candy, elsewhere referred to as queen-candy, made by mixing finely-powdered white cane sugar with a little warmed honey, the two being kneaded together on several successive days so as to make a stiff paste that will retain its moisture for some time, and yet be too firm to fall out of shape at the ordinary temperature. This hole is sometimes lined with wax to prevent the wood absorbing any moisture. The queen, with one or two dozen fairly young workers, occupies the other two large holes, the end one of these being pierced by a few small holes to provide necessary ventilation. A piece of wire-cloth covers the cage, and this is fastened down securely together with an outer lid of thin wood by means of a few fine wire nails. Queens so packed are generally none the worse after two or three days' confinement. For sending queens to or from foreign countries special travelling cages are made, in which the queens will live for two or three weeks, or even longer.

Approximate Duration of Stages in Development of a Fertile Queen Bee.

Egg	3 days	16 days.
Larva (early stage) ...	2 days	
Larva (later stage until cell is sealed)	3 days	
Sealed queen cell.....	8 days	

Virgin queen.....about 5 to 25 days.

Queries and Replies.

[3371.] *Coarsely Granulated Honey.*—Will you kindly tell me through the B.B.J. what is wrong with sample of honey sent? It is some that was gathered here, and seems sugary, and has not much flavour. Bees were not fed after May, and honey was not taken till beginning of September. There is very little pasturage for bees just here, a little clover and mustard being the chief source. I have kept bees for three years, and all my knowledge of them has been from your excellent little paper. Thanking you in anticipation, and for answer to my last question,—PUZZLED, Sherborne, April 14.

REPLY.—We find nothing wrong with honey beyond its having granulated with a very coarse grain. Flavour is fairly good,

but the exceptionally coarse granules make it unsuitable for table use in its present condition. It has to be literally "chewed" in using.

[3372] *Queenless Stock in Mid-April.*—Will you tell us what to do in the following circumstances? After cleaning a hive to-day we found the queen-bee dead! She appeared to have been dead some time—probably a month or more. The singular part is that all the frames were covered with bees, which appeared in a healthy condition. There did not appear to be any brood in the hive. Name enclosed for reference.—BURNLEY, April 12.

REPLY.—If bees are so strong as to cover all the frames it should be worth while to purchase a fertile queen and introduce her without delay.

[3373] *Continuous Use of Naphthaline in Hives.* — Will you kindly say:—1. Do you approve of always keeping in the hives two balls of naphthaline split into halves? I did so when making up mine for the winter, and I find that two or three of the hives have dwindled to nothing, and no dead bees were in the hives, so they must have gone elsewhere. Would the smell cause them to leave? 2. Which do you prefer: Frames running parallel to entrance, or from front to back of hives? I fancy the first-named way would be warmer in winter, particularly if exposed to winds; and no doubt from front to back would be more convenient to the *bees* in the working season. I find you can use them either way in the "W. B. C." hives.—F. J., Mountmellick, April 13.

REPLY. — 1. Yes, if there is any suspicion of foul brood in the district; but preventives may, of course, be dispensed with if there is no infection to prevent. The "smell" of naphthaline would not cause bees to leave the hives if used as stated. 2. We prefer frames hanging at right angles to entrance.

[3374] *Erratic Egg-Laying by Queens.*—The last two days being very fine and mild stocks of bees are working vigorously. I made a "spring examination," and found all stocks have come through winter very well. My strongest stock has two frames filled with brood and eggs, and I noticed one patch of eggs, say 3 in. square, on one comb (worker cells), a great many with two, three, or four "eggs" in one cell. 1. Can you say if this is usual? 2. If not, what is the cause of same? 3. Also, what will become of the larvæ when they hatch out? I saw queen, and she seemed all right. I do not know her age, but *think* this is her third season. There are plenty of stores in this hive (seven frames at present in brood-chamber, three of which are heavy with honey or syrup). 4. Do I need to stimulate with slow feeder, or simply uncap the stores from time to time? I want to be ready for fruit-blossom. Bees are natives. Reply in B.B.J. will much oblige. —BLACK B., April 12.

REPLY.—1. It is usually a sign of failing powers when queens at this season deposit several eggs in one cell. 2. The exception to the above rule is when a very prolific queen heads a stock weak in bees. She may not be able to extend the brood-nest owing to the paucity of bees. 3. The larvæ will remove the surplus eggs. 4. Uncap stores.

[3375] *Doubling for Extracted Honey.*—Reply to the following in B.B.J. will oblige. I am proposing this year to double two hives and work for extracted honey. In the "Guide Book" we are told to put one hive containing ten frames full of brood, but without bees, on to another hive full of brood and bees, but with excluder-zinc between. As soon as the brood in the top hive is hatched the bees will fill the cells with honey, and extracting can be done whenever there is sealed honey in the upper hive. 1. What I want to know is: Will not honey extracted be deteriorated if from brood-frames? 2. I suppose in a district like Blackheath one would secure better results from extracting to working for sections? I send name, etc., for reference.—E. J. D., Blackheath.

REPLY.—1. Honey extracted from brood-combs is not quite equal to that from clean combs never bred in from the show-bench standard, but for marketing purposes there is no appreciable difference. 2. Yes.

[3376] *Cutting Holes in Foundation.*—A little while ago I was advised by a gentleman to pierce a $\frac{3}{4}$-in. circular hole through the comb-foundations used in my sections, which I did. While reading of the ways of bees I saw it stated that if a round hole be made in the middle of a section the bees *cannot* fill it up. I understand they will fine away the cells and round the edges, but the hole remains. Is this so?—J. A. CHINCHEN, Wimborne.

REPLY.—While it is certain that bees are disinclined to fill up holes cut in foundation, it is altogether wrong to say they "cannot" do it. Your best course is to avoid cutting holes in centre of section; it serves no good purpose to do so.

[3377] *Doubling and Storifying.*—Kindly answer the following question in the B.B.J. I wish to double some of my stocks this season, and it has occurred to me that when the frames containing brood are removed from the one hive and placed above the full hive, with an excluder between (as advised in the "Guide Book"), there will in all probability be queen-

cells, and certainly drone-cells, in the frames, which are eventually to become the receptacles for honey. If these latter are allowed to hatch out there will be drones in the upper story which will be unable to escape, and this seems likely to lead to trouble, does it not? I therefore ask: Should the queen and drone cells be cut out before the frames are placed above the brood-chamber? If this is not done the only alternative would appear to be to prop up the upper story in such a manner that the drones, when hatched, may be able to escape. I send name, etc., for reference, and sign—B., Ingatestone, Essex, April 16.

REPLY.—It is by no means "probable" that the brood-combs removed will have queen-cells built, if doubling operations are started at the right time—i.e., before the bees have begun preparation for swarming; but if either queen-cells or drone-brood are found the cells containing it must be cut out.

THE "EDWARDS" SWARM-CATCHER.

AN APOLOGY.

I wish to express my regret that in making the swarm-catcher referred to and illustrated in the description of my apiary, which was published in the B.B.J. for March 10 last, I should have inadvertently infringed the rights of Mr. Edwards, of Sunningdale, in his catcher (Reg. No. 380,030). In condonation of the offence I have agreed to the publication of this apology, to pay a nominal sum as damages, and hereby undertake not to repeat the offence.—ALBERT E. SAWYER, Cirencester, April 14.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 7 to 10, at Guildford. — Royal Counties Agricultural Society's Show. Bees, Appliances, and Honey Department, under the management of the Surrey Bee-keepers' Association. Twenty-one classes. Schedules from F. B. White, Hon. Secretary, Marden House, Redhill, Surrey. **Entries close May 14.**

June 21 to 25, at Park Royal, London.—Royal Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A. Increased prizes for B.K.A. Associations as arranged in divisions or groups of counties. Schedules from Edwin H. Young, Secretary, 12, Hanover-square, W. **Entries close May 2, or at extra fees up to May 16.**

July 14 and 15, at Grimsby.—Show of Honey Hives, and Bee Appliances in connection with the Lincolnshire Agricultural Society. Bee Department under the management of the Lincs. B.K.A. Fourteen classes. Liberal money prizes and silver medals. Schedules from R. Godson, Hon. Sec. Lincs. B.K.A., Tothill, Alford, Lincs. **Entries close June 14.**

August 4, at Kingsthorpe, Northants.—Honey Show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar of honey. (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Hon. Sec., Kingsthorpe, Northampton. **Entries close August 1.**

Echoes from the Hives.

Whitford, Devon, April 18.—Bees have had a delightful time here lately; all my stocks are strong. I had over 80 lb. stored in shallow-frames by one stock last year from mid-June to last week in July. I put the frames back again after extracting, but the adverse weather later on stopped all work for the year. Clover-bloom was plentiful quite late in autumn, but continual rains prevented further honey-storing. I hope 1904 will prove a success.—G. TURL.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

S. C. LEAVER (Ashford).—Bees "Specking" Clothes Hung Out to Dry.—This is a trouble not easily got over unless some arrangement can be come to with your neighbours to lessen their complaints. It only happens after bees have been confined to their hives for a long time in spring, and badly need a cleansing-flight. Later on there will be nothing to complain of in the same direction.

W. G. (Burnley).—1. The "insect," if enclosed in match-box as stated, must have escaped in post. 2. The bees sent are workers of the common brown variety.

A. A. (Alresford).—Suspected Comb.—No disease in comb, and nothing to indicate a "fertile worker" as supposed. The stock may have been headed by a worn-out queen, and in consequence the stock has dwindled, so that brood perished through there being too few bees to cover it.

*** *Several Letters and Queries are unavoidably held over till next week for lack of space.*

Editorial, Notices, &c.

FOUL BROOD LEGISLATION.

Mr. George M. Saunders, Hon. Secretary Cumberland B.K.A., writes us again with reference to the few remarks we felt it our duty to make on page 151 last week, this time refusing to accept our "excuse" of "crowded out" as intended to be taken seriously.

It was hardly necessary for Mr. Saunders to intimate his resolve "not to write further on the subject in our pages," so far as it concerns ourselves, nor need we adopt any such subterfuge as he amiably suggests as an "excuse" for declining to publish his most recent letters. Criticism, whether of Editors or contributors, to be eligible for our pages, must be expressed with ordinary regard to courtesy, and without personalities or being needlessly offensive. Otherwise it cannot be inserted without departing from the long-established rule of this journal, a rule clearly reasserted and emphasised in the first few lines of the present year's volume. Mr. Saunders's communication, dated the 22nd inst., is not written in accordance with this rule, and is, therefore, unsuitable for our columns. We desire, however, to make a correction with regard to Lord Onslow's letter quoted on page 141. This letter was addressed to Mr. Lowther, not to the Irish Bee-keepers' Association, the mistake being ours.

BRITISH BEE-KEEPERS' ASSOCIATION

The monthly meeting of the Council was held at 12, Hanover-square, London, W., on Wednesday, April 20, Mr. T. W. Cowan occupying the chair. There were also present Colonel Walker, Dr. T. S. Elliot, Messrs. D. W. Bishop Ackerman, R. T. Andrews, T. Bevan, W. Broughton Carr, W. F. Reid, E. Walker, and the Secretary. Letters regretting inability to be present were read from General Sir Stanley Edwardes, Mr. W. H. Harris, and Mr. T. I. Weston.

The minutes of the previous meeting were read and confirmed.

Five new members were elected, viz.:—

Mr. S. A. Ballance, Craigieburn, Woodside Park, N.

Mr. Emile Garcke, Ditton House, near Maidenhead.

Mr. R. Godson, Tothill, Alford, Lincs.

Mr. James D. May, Holmesdale, Redlands-road, Reading.

Mr. J. P. Phillips, Spetchley, Worcester.

On the motion of Mr. Reid, seconded by Colonel Walker, Mr. Cowan was unanimously re-elected Chairman of the Council.

Mr. T. I. Weston was similarly re-elected Vice-Chairman on the proposal of Mr. Cowan seconded by Mr. Ackerman.

The Finance Committee was re-elected with the addition of Messrs. Ackerman and Bevan.

It was resolved to hold meetings of the Council on the third Wednesday in each month with the exception of August and October.

Wednesday, May 18, was fixed for holding the first-class examination in London.

Several letters in regard to coming examinations were read, and the Secretary instructed in respect to the proposed arrangements.

It was decided to admit a representative of the Lady Warwick College to membership of the Association at an annual subscription of one guinea, such payment to entitle students of apiculture at the college to enter for competition at honey shows under the Society's auspices, or for diplomas for proficiency in bee-keeping, at the ordinary rates payable by members.

The Sub-Committee's report and recommendations with regard to third-class examinations was duly approved by the Council.

Grants of medals were made for competition in the honey class at the "Grocers'" and "Confectioners'" exhibitions to be held in September next.

A further letter was read from Mr. Geo. M. Saunders, Hon. Sec. Cumberland B.K. Association respecting foul brood legislation, to which the Council has sent the following reply:—

British Bee-keepers' Association,
12, Hanover-square, London, W.
April 23, 1904.

Mr. Geo. M. Saunders, Hon. Sec. Cumberland B.K.A.

Dear Sir,—In reply to your letter of the 19th inst., I am desired by the Council to say that they, as a body, have in no way altered the views they held in 1896 as to the desirability of legislation for the suppression of foul brood.

They do not wish to discourage any efforts made in this direction, and if evidence can be brought before the Council that the county bee-keepers' associations, or a considerable majority of them, now desire legislation, and are prepared to provide the necessary expenses, and that the County Councils will undertake to put in force any suitable Act that may be obtained, the Council would be ready to consider the matter and take such steps in promoting legislation as may be deemed desirable.—Yours faithfully,

Edwin H. Young, Secretary.

The next meeting of the Council will take place on Wednesday, May 18.

THE "ROYAL" SHOW IN LONDON.

DATE FOR CLOSING ENTRIES.

We call the attention of readers to the advertisement on front page of this issue, wherein it is seen that only three days remain in which to apply for schedules and make entries for the show at Park Royal in June.

The last day for receiving entries is Monday next, May 2, or at extra fees up to May 16.

In view of the favourable bee-weather now prevailing, and the abundant forage available to the bees, there is every likelihood of new season's honey being plentiful before the remaining six weeks have expired prior to the opening of the show.

Readers should also bear in mind that it is not a case of North competing against South this time, for the competition is narrowed down to the several groups of counties, respectively, in which honey of similar character is gathered. The schedule has been framed with the express object of giving a fair chance of winning to the produce of bee-keepers located in every county in the Kingdom, and thus removing what was formerly a standing grievance to exhibitors. Thus, with a full opportunity before them, we hope they will rise to the occasion, and make an entry while there is time. It would not be creditable to our industry if there was only a half-hearted competition after all that has been said in our pages on the question of "Shows and Showing," and where there is so good a chance of scoring a success at the "Royal," it would be indeed regrettable if we had the prizes almost going a-begging—as was the case last year—through lack of enterprise on the part of bee-keepers themselves.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

AMONG THE BEES.

SOME EARLY HONEY SOURCES.

[5506.] *Fruit Blossom.*—All over the country fruit culture of late has been developed to an enormous extent in many centres, and it is regrettable that a corresponding increase has not taken place in apiculture, as the two should go hand in hand. The success of fruit growing depends very much on the fertilising of the blossoms by *Apis mellifica*, while the nectar secreted by most of these fruit blossoms is a very valuable asset for the bee-keeper. It is unwise to allow it to waste its sweetness on the air, when scores, or mayhap hundreds, of colonies of bees could find an abundant source of honey supply in their nectaries. The farmer or fruit-grower is not a penny the poorer for the loss of the sweet juices they extract from his fields, and the flowers, instead of being in any way injured or impoverished, derive an incalculable benefit from the visits of these thousands of nectar-loving amazons. (1) In such a district as that round Blairgowrie, where raspberries are grown to an enormous extent, and hundreds of acres are being annually added to the area covered by this nectar-producing plant, bee-keepers should take advantage of this very important supply, and dump down their hives near the fruit fields. The raspberry flower is possessed of a series of small nectarious cups, arranged in a circle, which, in favourable weather, secrete abundantly, and a bee can load up quickly from one of these. Even when grown in small quantities, this source aids brood-rearing, and so helps on our colonies at a time of the year when they much need its aid. (2) In Clydesdale apple and pear trees are extensively grown, and their rich and abundant blossom is eagerly sought out by our hive bees, with the best results, as these flowers form an important source of honey supply. If weather is favourable, and if bees were only equal in numbers when they are in bloom to what they are later on in the season, the surplus from this source would be more appreciated than it is. The great drawback, however, is that in many cases weather does not allow a constant or prolonged foraging, resulting in the fact that frequently this supply is little more than tapped. Many other fruit trees might be named, all proving a great gratification to the bee foraging for both honey and pollen. so that their blossoms are eagerly sought after at a time when honey sources are few and the supply from most only limited. (3) Of garden fruit, it is desirable to have all kinds of currant bushes, black, white, and red, well represented when space permits, as bees extract a large quantity of honey from their abundant small blossoms, and pollen is also obtained with great facility. Gooseberry blossom has the same good quality as the currant, and its flowers are even richer in honey, while the pollen derived from them is a peculiar kind of green, quite dissimilar to any other collected by the bee.

Garden Flowers.—I do not set a high value on any garden flower as a honey source. Some of those blooming in spring and early summer, at a time when nectar-producing plants are few and far between, may be patronised by the bees; but it does not pay to grow any of them for the sake of their honey alone. Borage is undoubtedly a bountiful honey-yielding plant, but who

would grow it in quantity as an ornament to their gardens? Rosemary is said to be rich in honey of a very pleasant flavour; "in the flowers whereof bees do exceedingly delight." Thyme yields abundantly, as do all the sage family. Mignonette is held by many to be the richest in honey, and it is worth growing for its own sake. Several annuals are favoured by the bee, but a list of them can be had from several dealers in bee-supplies, and seeds can be purchased in small packets at a nominal price. About a dozen of them are really worth growing.

Field Mustard.—This plant is frequently more common and widespread in our turnip and clover fields than our farmers like to see. In sunny weather bees work on it assiduously, and it supplies a considerable quantity of thin, rather light honey, with a sharp and acrid, but by no means offensive, taste, and a flavour at least passable. Very seldom, however, do we find it deposited in supers, as the bees generally require all the supply available at the period when it blooms in the body-box to aid them in brood-rearing. This is, indeed, the use to which we should be pleased to see our bees placing this supply, for when it is, later on, mixed with white clover, supplying us with a blend of the two, it not only affects the flavour and aroma of this delightful sweet prejudicially, but it causes the honey, both in comb and extracted, to granulate rapidly. For generating young bees, however, by stimulating both queen and workers, and aiding the former to keep up her powers of ovipositing at a high pitch, it is invaluable. To the farmer this charlock, or wild mustard (known also in some parts of the country as ranches), is a troublesome weed in the cornfields, making them at times in May a perfect sheet of yellow. It is most hardy, and can scarcely be killed, while its luxuriant growth chokes down the corn plant; but to the bee-keeper it is a valuable early source of honey supply.

Seed Blossoms.—Turnip plants, and all the brassicas indeed, when grown for seed, have a great wealth of bloom, and they yield an excellent and abundant supply of both pollen and early honey. Last year a neighbouring farmer came to me saying my bees must have swarmed, as on a fine, bright, delightfully sunny day of early May there was one on his turnip seed plants. The many thousands of diligent workers searching for the covered sweets on the very limited area, and the loud and pleasant hum, really gave some colour to the excusable error of one who was not a bee man. Willows, sycamores, and many other early sources must be left undescribed for want of space.—D. M. M., Banff.

THE SPRING EXAMINATION.

ITS IMPORTANCE TO THE BEGINNER.

[5507.] It would be, perhaps, too strong an assertion to say that there is no bee-keeper worthy the name who does not rejoice at the coming of spring, with its promise of summer to be; but it is certainly true that the vast majority of us, veterans and novices, feel an added thrill of pleasure, denied to those outside our esoteric circle, with the first mild days, and the consequent housekeeping activity of the bees; whilst the sight of the first homeward-borne pollen is as a spur, rousing to action, reminding how all too quickly flies the year, and perhaps pricking our conscience in the memory of work undone, and the knowledge of our unpreparedness for the season so close upon us.

How surprising it is that bee-keepers, who year after year are caught napping over their supers, fail to take warning by their difficulties, and still leave the necessary work until the moment when they pay for the delay in hard cash. In some cases, perhaps, it is not an entire lack of interest, nor an actual disbelief of perennial warning, but just failure to apply the sermons of the text-books personally; and it is likely, where this is the case, that the bees themselves will not be ready by "a certain date," for their preparation is a matter of forethought with every careful bee-man.

It is open to beginners to avoid such mistakes at the outset, and as much depends upon a good start, it is well to realise the importance of the first examination, coming as it does at the most critical time of the apiarian calendar. It is obviously better to be ready with the bees in summer too early than too late, but the reverse is decidedly true of spring manipulations; and while the former condition depends to some extent upon this latter work, judgment must be used as to the time for such disturbance, varying as it does with different districts.

This must be decided mainly by practical experience of past seasons. Nor is it advisable to trust too much to one's memory in these matters; but a careful annual record should be made if the best results are to be obtained. Of course the real beginner is without such foundation, and to these we would say: Do not hesitate to go to your bee-keeping friend of experience, if such you have, with reasonable request for a little general advice.

Such an one is the most likely to give information which is of local value, as to the times and seasons which must regulate preparatory work.

We require our stocks to be crowded into the supers by such a date—say, the beginning of June—and it is apparent that supers cannot wait for this, but must have

been in place for some time to allow of the crowding process, and to discount if possible the swarming fever which seems to attack most healthy frame-hive colonies about this time.

Well, let those who will grumble, grumble at swarms; but, for myself, I would say: Let them come if they will.

I am at least glad that stocks are up to swarming pitch, for whilst preferring that they should not swarm, I would rather deal with the profitable swarm than with the weakly lot, which may later take it into its head to swarm, when the value is that of the proverbial fly.

The question then arises: How long antecedent to the flow is it necessary to stimulate or otherwise cultivate the necessary crop of bees?

Experience teaches that a small stock may be worked up to swarming pitch in about six weeks, but this, even in expert hands, is usually the result of exceptional care.

Where such weak stocks exist, and there is little likelihood that they will be ready for the main harvest of the summer, it may be advisable that they be definitely relegated to some auxiliary work, such as brood-comb building from sheets of foundation.

Where the heather gives the marketable harvest, such stocks may prove to be as valuable as the most forward, or they may be united just before the clover flow, as advocated by one of America's successful specialists, Mr. G. M. Doolittle.

Of course, there are stocks which will work up without assistance — well-provided stocks headed by young queens, and with *room for the brood-nest*.

If these conditions are present the novice may do much worse than allow such stocks to work out their own salvation, which they will probably accomplish better without his help. But while such stocks are, let us hope, in the majority, others will require some care, and the sooner, in reason, that these are taken in hand, the better, for it must pay the bee-keeper, on however small a scale, to know at the earliest available moment the actual condition of his stocks, whether good or bad. If good, his mind is at rest; if bad, he is able at once to put matters right; and it is surprising how far from the truth would be many a bee-keeper's written forecast of the spring examination of each hive.

The hives which were supposed to be equally well provided in autumn show astonishing discrepancies, from which many valuable lessons may be learned, if the owner will but carefully note down at the time the state of things and compare with the autumn record, noting the differences, if any, in hive construction and situation. Over-confidence that matters are all right does not pay, but it does pay to make sure. The queenless lot may be united at once, and its stores disposed to better advantage than as the possible prey of robbers, whilst the impoverished cannot too soon be supplied.

In my own case, out of several young queens packed up late last autumn, after a trying wait for proof of mating during wretched weather, I found this spring that one was missing, how or when is a matter of conjecture, whilst another proved to be a breeder of drones, yet she made pretension to the airs and graces of maternity before the winter.

The point I wish to make clear is that there is a world of difference between an early thorough examination and the constant fiddling little attentions of which some beginners are guilty. Where it has not already been done, the first favourable opportunity for examination should be seized, and the thermometer is the best guide.

Where attention is paid to the temperature, examinations may be made with advantage, even in early spring.

If the thermometer stands at 50 deg. shade, with the sun shining and no wind, the bees are sure to be flying, when, if the examination be quiet and not too prolonged, there is likely to be neither trouble from chilled brood, balled queens, nor robbers.

I find from my record that such days occurred this year upon January 27, February 21, and March 19 and 20; since when we have had much favourable weather.

In any early examination, it is an economy of time to take a well-filled comb or two out in a closed box, or it may save the opening of a hive twice, to take such at once from stocks which can spare them to those which are short.

But while crowding down the bees may secure greater protection it is false economy to greatly reduce the stores of any stock at this time, unless the brood-nest is actually crowded out with stores, which is rarely the case. If this be so, it is also likely that the stored pollen may not be fully available, and both matters may be put right by inserting a clean comb on either side of the patch of brood. These combs may have one side each filled with pea-flour well shaken into the cells. I do not know of any quicker method of supplying the needs of the bees when there is a dearth of natural pollen, and breeding appears to be slow on this account. But I would earnestly repeat the sound advice of older bee-men, not to tinker fruitlessly with the bees at this time, certainly until more experience has been gained in their management.

(*Continued on page* 166.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

Our friend Mr. Kerry, whose letters in our pages under the initials "M. K., Piltown," will be familiar to older readers, is a bee-man of the best type, one who keeps bees "for the love of them," and with his well-earned pension as a provision for a rainy day, resolves on relying on his bees for the rest. We wish him good luck and long years of pleasant life at "Piltown Cottage Apiary." For the rest, his notes need no addition from us. He says:—

"I commenced bee-keeping in September, 1887, by the purchase of small lots of bees in a skep, and after feeding and nursing them through the winter, those gave me two swarms the following June. I then purchased a cottager's hive, along with a rack of sections, and, with this as a model, began to make my own hives, and from year to year my stocks gradually increased, till they numbered thirty colonies, all in frame hives.

"I got permission to stage an exhibit of honey at the Iverk Farming Society's show held in Bessboro' Park, and after making a second exhibit of the same kind, the Society included sections and extracted honey in their schedule, with good prizes.

"This show eventually proved to be of great assistance to me, for I find no difficulty now in disposing of my produce. I was awarded an expert's certificate in October, 1902, by the I.B.K.A. In later years my assistance was sought by beginners in establishing apiaries on modern lines in the surrounding districts, many of which now flourish. I am always glad to render help whenever asked, for I earnestly wish to bring about a spirit of brotherhood and co-operation as regards our industry.

"Like all beginners, I made mistakes at the start, and got well punished for any rough handling by the bees, but for many years past I have been able to get through all sorts of manipulations without using a veil or any protection when working among the bees.

"I was fortunate—soon after making my start as a bee-keeper—in hearing of the 'British Bee-keepers' Guide Book' and the BRITISH BEE JOURNAL. I sent for the 'Guide Book,' and, having read, marked, learned, and inwardly digested the contents, I set to work out by practical experience what I had acquired by theory, and in this way soon became master of my work as a bee-keeper. I also became a regular reader of the B. B. JOURNAL, without which it would have been next to impossible for me to make a real success of my undertaking, there being no one within reach working bees on modern methods to have a chat or compare notes with, nor was there any experts or instructors at that time. But all that is now changed in Ireland; we have two monthly bee papers and an I. B. Guide. Several of our county councils have included bee-keeping in their schemes, and have engaged instructors in bee-keeping for their respective counties, so the rising generation of Irish bee-keepers should have a full chance of success.

"I have had a fair amount of experience

MR. MICHAEL KERRY'S APIARY, PILTOWN, CO. KILKENNY.

in dealing with bees affected with foul brood in all the stages of this dire disease, and of all the methods, I prefer the 'shake off' plan to any followed by feeding with medicated syrup, and a thorough disinfecting of hives with a good petroleum soldering lamp. This is a powerful lamp—will melt copper wire, 5-8 mm. in diameter, in the open flame—is handier, and does the work more effectually than any other plan, and I have tried almost all the known methods.

"My locality is a fairly good one for honey, as shown by my having in one year secured 170 1-lb. sections from a single hive, but this was the largest 'take' I ever had. I usually secure a fair, all-round return. The honey some years is a bit dark in colour, owing to the bees working on the many sycamore and fruit trees before the white clover blooms. Some years I take my hives to the heather, but am beginning to think the 'game is not worth the candle,' except as providing winter stores for the bees.

"I work for both sections and extracted honey, running about half the stocks for each, but the strongest stocks are invariably supered with shallow frames, and they yield me about 60 per cent. better results than those supered with sections. All sections sold locally and in the neighbouring towns are delivered to purchasers unglazed, but those sent by parcel post, rail, or boat are glazed. When sent by rail I always book at 'owner's risk' rate, and have nothing to complain of. In sending honey per rail I find the heavier the case is the more safely it travels if properly packed, because it cannot be knocked about in transit. I have frequently sent 130 to 150 1-lb. screw-cap jars in one box.

"On the point: Does bee-keeping pay? I emphatically answer, Yes; and in a poor country like Ireland the industry is a great benefit to small farmers, labourers, and cottagers engaged in it, by supplementing their slender incomes and bettering their position generally, when once they have acquired the necessary appliances. But apart from the financial aspect of bee-keeping, the health-giving pleasure to be derived from it is more than I can express. I was a public servant on becoming owner of my first stock of bees, and from that time to the end of 1899, when I retired on a pension, the number of colonies in my apiary gradually increased, and I became more scrupulously careful and diligent in the performance of my duties in case that any error or mistake might be the cause of my transfer to another locality, and the breaking-up of my bee-keeping. Happily, however, all went well, and I am now, since 1899, devoting my whole time to my bees and those of my clients.

"In conclusion, let me say that the bees have made for me hosts of friends, and brought me into contact with every class of society, including Royalty—the grandson of our late Queen visited the Earl of Bessborough, and I had the honour of a hand-shake from him in the honey tent at the show being held during his visit. We made him a present of Irish honey, which he graciously accepted and acknowledged by a nice letter to our hon. secretary. Given a good year in 1904, I intend to make the most of it, and hope all my brethren in the craft will do the same."

(*"The Spring Examination" continued from page* 164.)

Do what is necessary at one operation, and leave the bees to progress as their instincts direct. Above all, do not be tempted by the supposed advantage of brood-spreading until experience has shown what you will gain in this matter without serious loss.

Do not try to follow several systems of management, or of anything else for that matter. Remember that warmth is the key-note of progress at this time, and hives cannot be too thick, too sheltered, nor too well protected inside. Do not forget to make that careful entry of the condition of each stock, and whilst your whole plan of campaign depends upon such knowledge, do not plan too much, but work simply, for, although records may be attainable, the beginner is more likely to have satisfactory returns if he does not attempt these by elaborate and tortuous methods.

I fear I must ask to be forgiven by the old hands for wearily trudging over well-known ground; but it is beginners whom I would address, as my own early bee-keeping was without the steadying hand of experience, and my greatest mistake was that I endeavoured to do too much, so that I feel the message strong upon me to other beginners of like mind: "What you do, do well, but, above all things, go slowly."—L. S. Crawshaw, Ilkley-in-Wharfedale.

FOUL BROOD LEGISLATION
AND THE CUMBERLAND B.K.A.

[5508.] I can quite endorse what "A Cumberland Bee-keeper" says on page 154 of your last issue as to the members of the Cumberland B.K.A. being far from unanimous in their support of Mr. Saunders in his agitation for foul brood legislation. It is quite true that the matter has never been discussed by members of our association, and I think this will also apply to other matters dealt with by Mr. Saunders in the capacity of hon. sec. The fact is, we are rarely given the opportunity of discussing anything that is of real use in

furthering our interests as bee-keepers, and a great deal of dissatisfaction is being expressed at the manner in which those in "high places" are "bossing the show." It seems to me that what we want is a more frequent calling together of our members for the airing of ideas such as will conduce to that fraternity and community of interest which should be among the chief objects of every association of this kind. Whilst I—and I believe I can speak for almost every member—am willing to admit that the association has done an immense amount of good by fighting, and, as far as possible, stamping out foul brood in the county, we must not forget that there are other matters of equal importance which might be taken up, and in which, up to the present, the association or its officials have been exceedingly lax. I trust that other bee-keepers in the county may be induced to write, with a view of infusing more life into the association, for if this is not speedily done, I am convinced that the institution will dwindle and die. I hope also that when we have our annual meeting—which, by the way, I believe is some time over-due—that the members will attend in force and have the courage to speak what they feel in regard to the present unsatisfactory management.—I send name and address, and sign myself A MEMBER OF THE CUMBERLAND B.K.A.

THE PREVENTION OF FOUL-BROOD.

[5509.] I was very much interested in your review of M. Ang. Gross' book, "La Loque des Abeilles" ("Foul Brood of Bees"), as published in the BEE JOURNAL of April 21. I have not yet read of so simple a treatment, and, if as efficacious as the author claims, the prevention of foul-brood is a comparatively non-troublesome matter. Its great advantage is that it is not necessary to take out the combs to apply the preventive or cure in the early stages of the disease, so that it may be continuously applied even in wet weather, a thing impossible with remedies which require the opening of the hive. It is also a boon to those whose time is limited, and who have a number of hives to examine.

This new remedy makes the necessity for legislation less pressing, as we can prevent the disease by occasional fumigations, and the disease need not be so much dreaded as before, though our vigilance should never be relaxed in connection with this disease. Legislation, is not so desirable as some think; it would involve a great deal of expense and interference with one's apiaries to an unwelcome degree; besides, so long as bees are kept in skeps they would not be thoroughly examined, and the Bill would require the abolition of skeps, which would not suit some bee-keepers.

Formalin seems to be the very thing we want. I see that M. Gross recommends boring a hole in the side of the hive at the back. I think a better plan would be to bore a hole in the floor-board at the centre of the back of same, which would suit the "W.B.C." hive and all hives much better, and not injure them in any way; the smoker could be fitted with a bent nozzle to suit for a few pence. Can you please state (1) about how big a piece of saturated charcoal would be enough for, say, twelve hives? (2) What is the object of covering it with leaves or paper? I wish to have an intelligent grasp of the principles involved so that I can modify as I find desirable in details. (3) Is the book by M. Gross procurable printed in English? I intend to use the new agent as a preventive, for I think prevention is better than cure.

For boring holes in the bottom of hives without disturbing the latter, a brace which works at an angle can be used. The holes so made could be corked, and just before use all the corks could be taken out, and replaced immediately after fumigating. (4) Is there any danger of hurting the brood by this new agent? (5) Does it hurt the brood to spray with any of the ordinary disinfectants usually used? I have recently been spraying mine as a preventive when transferring them to new clean hives. I have never done so before; but foul-brood has been in the district, and I wish to spare no pains to keep free from it, for my own sake and the sake of others, and would be very glad to find formalin all that is claimed for it; and, if for no other reason than learning of it, will consider that the trifle spent on the BEE JOURNAL weekly is a very good investment. Some bee-keepers never take in a bee paper, but the loss is their own.

To know of formalin is worth pounds to any bee-keeper. — W. J. FARMER, Truro.

[(1) No definite size is given by the author, who says this must be determined by experiment. (2) The leaves and paper are used to keep the fuel in place, while the leaves and juniper twigs give off moist vapour, which is useful. (3) No. (4) The author says there is no danger if it is not over-done. (5) This is certainly not recommended, nor is it necessary.—EDS.]

JUDGING AT HONEY SHOWS.

[5510.] Colonel Walker's paper on judging honey, recently read at the B.B.K.A. conversazione, is to my mind very lucid and distinct. I quite agree with the Colonel that the judge should be equipped with colour-test glasses, and the measure for the sections. The tables of marks are also very good, and though differing in the num-

ber of marks, on the various points, I may say it is the line I have always followed when judging at shows. I hold the opinion, however, that a judge should be prepared to answer any question respecting the various exhibits, and thus prove that the awards are correct; then, if he has done his duty without favouring any one, he has nothing to fear. I cannot agree with the remarks made by Mr. Pugh on colour-grading being the duty of the steward or secretary; for instance, John Smith enters a dozen jars of extracted honey in the "medium" class, which is No. 6 on the schedule, because he considers it too dark for the "light" class. His tickets and number of entry are sent him, but when his honey arrives on the morning of the show, and is placed alongside the other exhibits, it is found to be the darkest in the medium class, and when the test glasses are applied it is found to be below the mark. The secretary cannot remove the exhibit and put it into the class for dark honey. The special tickets for disqualifications, I consider, are a very good suggestion. Again, it is well for an experienced judge to be appointed with a junior. In conclusion, I think all who are interested in honey judging must feel grateful to Colonel Walker for his valuable paper on the subject.—J. S. L., Oldbury Wells, Bridgnorth.

BEE-NOTES FROM NORTHANTS.

[5511.] I examined my bees on April 18 for the first time since October last, and found them in first-rate condition, and plenty of honey in combs, and doing well; in fact, some had more than enough of sealed stores, so I equalised the food by taking out a comb of stores and giving it to stocks less well provided. I never feed my bees but once a year, when I give each stock a good cake of candy some time in January. I lay this on just above the cluster, then, if the weather becomes very cold, the bees have food close at hand without moving about for it. I adopt this plan because most of my stocks are wintered in double-storied hives, with eleven frames in each story, or twenty-two frames in all, and never lose a stock in the winter as I always leave them a full supply of honey in September. I have now twenty-three stocks, and they did well last year, though the honey was rather dark in colour. I have only had one swarm in four years; in fact, I do not go in for swarms, as my hives are located four miles from my home, and I am unable to see them more than about once a week. From all appearances at present the bees seem likely to come out very well this year, not only my own, but those of several bee-keepers that I have visited.—Wm. Manning, Northampton, April 21.

A HOME-MADE EXTRACTOR.

[5512.] If you will kindly insert one more letter from me on the above subject in reply to your correspondent, "Pro Bono Publico" (5497, page 154), I will be glad. It is not of much use to have any further argument in print. Let us put the thing to a practical test. I therefore ask: Will some reader of the B.B.J., living near Charing, kindly volunteer to come and see the extractor at work during the coming season, and afterwards report on its efficiency to the Bee Journal?

Perhaps the sample of honey I sent to the Editors may have lost consistency from the fact that I had to reliquefy it after granulation.

I am sorry the letter I wrote has not met with "Pro Bono Publico's" approval, because I had some thoughts of contributing an article on the subject of "How I made an Observatory Hive for 3s." This, I supposed, might be interesting to brother schoolmasters, for mine is fixed in the school window, and the children are hugely interested in the operations going on in the hive. If it was only to lead to my being adversely criticised, I should hardly care to write.—S. Darlington, Charing, Kent, April 25.

[We do not think our friend need have any fear in the direction indicated from our personal knowledge of the critic referred to above.—Eds.]

HOME-MADE APPLIANCES.

[5513.] In reply to your correspondent "Heather" (5505, page 156), I beg to state that the "Rymer" honey-press is made of metal, and is not in his power to make unless he has a foundry at his command. It is a most efficient machine, and, so far as I know, the best of its kind. Bee-keepers may make fair hives of wooden articles themselves, but extractors or honey-presses are best purchased, and are very cheap and very good. Indeed, I think there is not much to be saved by making any appliances; all are very cheap indeed, as sent out by the chief makers, and are true and exact in fit. — W. J. Farmer, Truro, April 23.

TEACHING BEE-KEEPING IN SCHOOLS.

[5514.] I agree with your several correspondents as to the desirability of teaching bee-management in the elementary schools, but care should be taken that correct diagrams are provided. I recently went into a school in which I am interested, and found a good sheet of illustrations, but the letterpress informed me that the yellow pollen carried in on the bee's thighs was

made into wax combs. This teaching could not do good or train good bee-keepers for future use. The sheet had been supplied and was issued by a firm in Paternoster Row, London.—R. P., Whitchurch, Salop, April 19.

Echoes from the Hives.

Somersham, Hunts., April 25.—For a week past we have had glorious weather for bees, they are bringing in honey and pollen in abundance. This is the best season in my remembrance for the fertilisation of fruit blossom, and I may add that in our fruit-growing district, the growers, are realising the importance and utility of bees in this important work. I have had several applications for hives of bees for fertilising fruit orchards, and have supplied the demands most willingly on the condition that the orchards "must not be sprayed with arsenical compound."—RICHARD BROWN.

Queries and Replies.

[3378.] *Uniting Stocks in Spring.*—I have a stock of bees in frame-hive which lost its queen during the winter. As the bees were pretty strong in numbers, and I thought them well worth saving, I placed a weak stock in straw skep over the body box, with the usual precautions, and the two lots have got them to unite quite peaceably. I now wish to remove the skep from overhead at as early a date as possible to prevent the bees from storing in the skep during the honey flow. I therefore ask if you will, with your usual kindness, advise me on the following points?—1. Will it be advisable for me without delay to drive the bees from skep in the usual way until the queen is secured, then replace the skep with excluder zinc between, for the brood to hatch out? Or would it be best to defer this operation until the weather is warmer? I have driven bees before, but not so early in the year as this. 2. Will you also please say if bees gather honey or pollen from the horse chestnut trees, which are very plentiful about here? In offering my tithe of thanks for the many helps given in B.B.J., I send name, etc., and sign FIEVRE D'ABEILLE, Gosport, April 22.

REPLY.—1. If the bees are using the body-box of frame-hive as their brood-chamber, there will be no need to trouble about "driving." If there is no brood in skep, the latter may be removed as soon as convenient, and its contents utilised as found desirable. 2. The horse chestnut yields pollen and a little honey, the latter of poor quality.

[3379.] *Starting a Small Bee Farm.*—As a reader of the B.B.J., and also a great lover of bees, I would like to ask your opinion with regard to commencing a small bee farm in this district; I would very much like to do so if I could make it a success. I have now five stocks in skeps to commence with, and live only about one mile distant from the heather. There are also hundreds of fruit trees planted about half a mile from my home, it is situate about ten miles west of Sheffield. I have been a bee-keeper all my life, but never in a larger way than owning a few skeps. I should be at liberty to make my own hives, as I have a workshop for my ordinary trade, and I want something to fill up my time. Will you please advise me as to the best method I could adopt? If space will allow, I would also like to ask what I must do with two skeps that have 7 or 8 lb. of honey in them, but the bees of both skeps have died, either through starvation or loss of queen. I send name and address, and sign ANXIOUS, Sheffield, April 21.

REPLY.—If your experience of the district, so far as its honey resources go, is favourable for the purpose, the next thing will be to study the up-to-date methods of modern bee-keeping and all connected with apiculture as a means of income. You will have to entirely give up the old-fashioned skeps, save keeping a few for swarms, perhaps. The first thing is to procure a "Guide Book," which will furnish all particulars with regard to your future work. You cannot learn bee-keeping from our "Queries and Replies" column.

[3380.] *Transferring Bees from Old Frames.*—Though a reader of the B.B.J., I have not had much experience in handling bees, so I am asking for some help in a difficulty. I bought a stock of bees in an old-fashioned frame-hive. They are a grand lot, but have been neglected for the past four years, and when you try to move the frames they fall to pieces. I tried to lift one frame, and it broke, and completely spoiled the comb. I therefore ask your kind help in the trouble, as I am very anxious to move the bees into a new frame-hive before they swarm, but, as already said, the frames will not stand moving. Hoping you can instruct to get them into another hive, and when to do it, I send name, and sign — C. B. A., Aylesbury.

REPLY.—Your best plan is to set the old hive, bees and all, on the top of the new frame-hive, and allow the bees to transfer themselves into the latter. Of

course, you will see that the new frames are fitted with full sheets of foundation, and also take necessary precautions as advised in the "Guide Book." When the queen has started laying in the new hive, the old one may be removed as directed, and its contents utilised.

[3381.] *Introducing Virgin Queens.*—Seeing that virgin queens can be obtained so cheaply (through the advertising pages of the BRITISH BEE JOURNAL) I should be pleased to know if they are introduced in the same way as fertilised queens, as I suppose they would not be so readily accepted as a queen already fertilised? I have a stock of bees in a skep (purchased this spring) placed on the top bars of a frame-hive for the bees to transfer themselves below, and should like to know how to introduce a virgin queen with a chance of success, when they have established themselves in the frames. Thanking you for identifying my bees in March 17 issue.—C. P., Aylesbury.

REPLY.—You will not find virgin queens advertised for sale in our columns in April. Why not buy a fertile queen, which are already offered as low as 3s. 6d. each? On the other hand, with regard to safety in introducing, virgin queens are not less readily accepted than laying ones.

[3382.] *Combs Infested With Wax Moth.*—I have a set of combs by me (not in use) that the wax moth has attacked. Can you tell me the best way to destroy the insects? Would putting them under water do the needful?—H. T. CRITCHLEY, Chalford, Glos., April 22.

REPLY.—If the larva of wax moth has made any serious headway in damaging the combs, there is nothing for it but melting them down for wax, if worth it, or destroying outright by burning.

[3383.] *Using Frames at Narrow Distance Apart.*—I should be much obliged if you would answer the following questions:—1. When using a "W.B.C." section-rack, is it advisable to remove each frame of three sections as sealed over, or is it better to wait till the whole crateful is completed before removing any? 2. Will bees as readily draw out into comb frames fitted with foundation when the spaces between the latter are narrowed as they will when they are the full distance apart (I suppose it is useless to contract the space between combs which already have drone-cells in them?) 3. Ought stimulative feeding to be continued after fruit trees are in blossom?—J. H. PROTHEROE, Walton-on-Thames, April 20.

REPLY.—1. Not necessary, but it is sometimes advisable to do so. 2. Yes. 3. Stimulative feeding may be dispensed with when honey is coming in from outside sources.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 7 to 10, at Guildford. — Royal Counties Agricultural Society's Show. Bees, Appliances, and Honey Department, under the management of the Surrey Bee-keepers' Association. Twenty-one classes. Schedules from F. B. White, Hon. Secretary, Marden House, Redhill, Surrey. **Entries close May 14.**

June 21 to 25, at Park Royal, London.—Royal Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A. Increased prizes for B.K.A. Associations as arranged in divisions or groups of counties. Schedules from Edwin H. Young, Secretary, 12, Hanover-square, W. **Entries close May 2, or at extra fees up to May 16.**

July 14 and 15, at Grimsby.—Show of Honey Hives, and Bee Appliances in connection with the Lincolnshire Agricultural Society. Bee Department under the management of the Lincs. B.K.A. Fourteen classes. Liberal money prizes and silver medals. Schedules from R. Godson, Hon. Sec. Lincs. B.K.A., Tothill, Alford, Lincs. **Entries close June 14.**

August 4, at Kingsthorpe, Northants.—Honey Show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar of honey. (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Hon. Sec., Kingsthorpe, Northampton. **Entries close August 1.**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

T. S. (Carlisle).—Sugar for Bee-Food.—If by "Demerara sugar" you mean raw, unrefined sugar, it is quite unsuitable for bees, especially as winter food. It should be obvious to any one that the long confinement in winter to which bees are subject, with no opportunity for a cleansing flight for months at a time, must render unsuitable sugar from which the molasses or treacle is not removed by refining.

F. POAT (Guernsey).—Honey Sources.—Furze, the common broom, and the hawthorn, or "May," all produce more or less honey, but none of them are regarded as reliable sources of supply.

Suspected Combs.

E. R. C. (Newton Abbot).—Comb is badly affected with foul brood.

C. H. B. (Newmarket).—You are quite right with regard to comb being diseased, but, indeed, by sample sent, the foul brood cannot be classed as "of old standing." In fact, all the capped cells contain larvæ hatched from eggs that have, in all probability, been laid this year, and some of the uncapped larvæ are only just beginning to turn colour.

W. T. (Stratford-on-Avon).—Comb is diseased (see next week's B.J.).

Editorial, Notices, &c.

THE "ROYAL" SHOW IN JUNE.

THE DATE FOR CLOSING ENTRIES.

Reverting to our mention of the above show last week, we now have pleasure in stating that it has been decided to extend the date of closing entries till May 16 without extra fees. This concession was made last year, and it is felt that the need arises equally this time, in consequence of the lateness of the honey season. The decision will, no doubt, be welcomed by many who had not made up their minds to exhibit, but will now be in a more hopeful position with regard to honey of the current year, which promises to be plentiful before mid-June.

The following letter, just received from the Vice-Chairman of the B.B.K.A., conveys a further announcement, which we do not doubt will be welcome to a large majority of bee-keepers:—

Salters' Hall, St. Swithin's-lane,
London, E.C.,
April 28, 1904.

GENTLEMEN,—I learn that considerable distrust is felt as to the working of the new clause in the regulations empowering the Show Committee to purchase winning exhibits. Will you kindly state, as plainly as possible, that the clause is inserted to give the requisite power, and will only be put in force after careful consideration of each case, probably in very few instances throughout the season?

Owing to the backwardness of the season it has been decided to allow an extension of time for making entries at the ordinary fees till May 16. I hope this will result in an increase in the number of entries.

THOS. I. WESTON,
Vice-Chairman, B.B.K.A.

There is no need for us to add anything to Mr. Weston's letter beyond saying that the only exception to dispensing with the purchase of winning exhibits clause would be in cases where complaint was made by other exhibitors in the form of a declaration that the exhibits staged were not the exhibitor's own produce. This exception, though an infringement of the rule is extremely improbable, will no doubt be acceptable to all right-thinking men.

In view of the whole situation, we are hopeful of seeing a satisfactory display of exhibits from bee-keepers located in all parts of the country, because, by the new arrangement of grouping counties, there is now no ground for complaint or grievance on the part of Northern bee-men that they had no chance of successfully competing with their more favourably located brethren in the South. Everyone now has an equal chance, and it is for them to take advantage of the arrangement.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "THE EDITORS of the 'British Bee Journal,' 10, *Buckingham-street, Strand, London, W.C." All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 10, *Buckingham-street, Strand, London, W.C."

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

INTERCOMMUNICATION AMONG BEES.

[5515.] Early one morning, at end of May, when honey had been coming in well for several days, I glanced out of a window overlooking the apiary at the hives, expecting to see the bees working hard. I observed, with surprise, that work was at a complete standstill, and confusion reigned among the hives. Large masses of bees were seen on the alighting-boards, and the hive entrances appeared to be blocked up with them, just as in desperate cases of robbing. The honey flow had been good, and warm, settled weather promised its continuance, so that I was forced to conclude that the disturbance was caused by a large number of bee-scouts apparently on the look-out for homes to which they might lead their swarms. I had indoor work to occupy me until breakfast, and while partaking of that meal several bees entered the room and began fussing about quite busily, which made my people jocosely remark that the bees had something very important on hand.

I explained what I had observed from the window, and added that I would soon restore order in the apiary.

A survey of the hives made it clear to me that the disturbance was caused principally by four strong lots of scouts attacking the hives where the trouble was. I therefore decided to remove the confusion and stop the fighting by offering the scouts a hive for their purpose and so allow the other bees to resume ordinary work. So I chose for the purpose a hive that had been prepared for an artificial swarm, and on removing the quilts I found two large spiders had taken possession of the empty spaces left between the frames, and were now preventing the scouts from bringing their swarms. I therefore ejected these spiders, and while clearing away their webs, and cleaning the floor-board, the bee-scouts were most assiduously assisting, crawling over my hands and

busily removing débris, and in every way urging on the work of cleaning up. I noticed, however, on replacing the quilts, that several scouts ran in to see that all was in order inside, and on coming out part of them remained to guard the entrance, while the remainder took wing and flew right away. I surmised that they had gone to fetch the swarm.

The next hive I prepared was two rows further off, but standing near enough to enable me, while working, to keep an eye on the one first prepared. In less than five minutes I heard a sound like that of a very large swarm on the wing, but it seemed a long way off. The apiary is situated on elevated ground, and as I gazed up the lower-lying meadows I noticed the swarm—looking like a small, dark cloud in the distance—come sailing along down the meadows until it reached the foot of the hill, then commenced rising over the tops of the trees growing upon the hill-side, and made a halt about 20 ft. away from the hive first prepared. At this point the swarm went through various performances most interesting to watch. The bees then threaded their way quietly into the home offered them and were soon in possession.

After I had prepared the second hive, I began getting a third one ready, but had only been a few minutes so occupied when I again heard the familiar sound, and saw a moderate-sized swarm making its way towards the apiary, where it soon found the home prepared for it, making as directly as possible for the entrance of the second prepared hive.

On approaching the hive, I saw the queen alight and enter, as if fully pre-informed by her scouts, and in this way acting very differently to the timid action of queens in artificial swarms when the latter are thrown on to the alighting board.

On completing the arrangements of the third hive I went indoors to pack some goods, and not more than ten minutes later I heard from my people that a large swarm was coming from the eastward. I therefore went outside and saw this swarm enter the third hive. Shortly afterwards I noticed that the fourth lot of scouts were still crowding about the entrance of one or two hives, but the apiary had already almost regained its normal condition, so there was no need to prepare a fourth hive.

The incidents related above are worth recording, because they appear to prove the existence of some power of intercommunication among bees on matters within the sphere of their domestic requirements. Nothing was done to the hives used beyond rendering them fit to receive a swarm, so the bee-scouts could take nothing material with them, yet they evidenced a ready means of guiding their swarm in each case to the home suitably prepared for them.

As to the manner in which I prepare the hive for a swarm, I allow an ample number of frames, and later on reduce these in number to the requirements of the swarm. I have observed that natural swarms have a decided preference for frames of foundation rather than built-out combs, and provided, also, a partly built-out comb is given to enable the bees to get rid of the honey they bring with them, which they do very shortly after tenanting the hive.—Peter Bois, Jersey, April 28.

BEE FORAGE.

[5516.] I shall be glad if you or some of your correspondents will kindly state what is the value of the dandelion as bee-forage. In a communication from Germany published in your columns in the spring of 1903, it is mentioned as the earliest bee-forage available there, and it would seem therefore to have some value. I write from an interested motive. Immediately behind my house is a large field of forty or fifty acres, plentifully furnished with dandelion. Hitherto I have regarded this as an unmitigated nuisance, for the seeds waft in clouds into my garden and keep me busy weeding, but if my bees can suck honey thereout in any quantity, I shall in future look on the pest with more equanimity.

It would, I think, be of general interest if the Bee Journal were to give a comprehensive list of bee forage, what trees, shrubs, and plants furnish honey or pollen, or both, and what are their comparative values. The chief forage-plants are, of course, well known, such as crocus and arabis, fruit trees, sycamore, white clover, lime trees, heather, and for latest crop, ivy, but I notice the bees work on many others. At the present time my bees are very busy indeed on the aforesaid dandelion, and use their tongues freely, as well as collect good sized pockets of bright-coloured pollen Later in the season a cotoneaster on the front of my house simply roars with bees, and they browse freely on sage, marjoram, thyme, and other herbs.

Have elm, beech, oak, hawthorn, ash, mountain ash, blackthorn, gorse, dogwood, maple, decided value? A discussion on this subject, if there has not been one published for some time, would probably be of interest to your readers and of value to all bee-keepers.—T. J. P., Guildford, April 20.

[The dandelion is very useful in early spring as yielding a plentiful supply of pollen, and thus stimulating breeding effectively, but its honey value is small; consequently it is not included amongst flowers valuable as bee-forage. With regard to publishing a full list of flowers

visited by bees, it would be more interesting to a few than useful to many. Our Senior Editor some years ago, compiled a very comprehensive list, giving also the respective honey and pollen values of each flower named. This list (recommended by the Council of the B.B.K.A., and published by Sutton and Sons, Reading) is still obtainable. None of the trees mentioned above, save hawthorn, have any value as honey-producers.—EDS.]

BEES AND HAZEL CATKINS.

THE MISSEL THRUSH.

[5517.] Referring to my letter in B.B.J. of February 25, on page 78, I should have explained that we were examining the blossoms on the hazel trees to see what sort of a crop of nuts we were likely to have this year, and I can now state from a recent inspection that we shall have a splendid lot this year. For the benefit of readers who do not know what the blossom of the catkin is like, I may say it is a small red blossom no bigger than a pin's head. Any one can see the actual catkins at a glance, but you must look very closely if you want to see the blossom, unless the sun is shining, when they show up very plainly. Now I contend that bees do not gather pollen from the hazel catkin; they would serve no useful purpose as regards fertilisation by so doing, because they would not first visit the catkin and then go to the tiny blossom. Again, the fertilisation dust is so fine that if they could collect it I should judge it would take them many days to gather a load worth taking home. If you want to get any idea of pollen dust, shake a branch loaded with catkins when the sun is shining, and you will see tiny specks of dust such as are always observable floating about in the room when a ray of sunlight comes in; or, if the sun is not shining, knock some of them on your coat sleeve, and it shows a slight yellow colour on the cloth. If any one could get a "snap-shot" of bees working on hazel catkins, I would be pleased to pay any reasonable price for it as a curiosity.

I asked some time ago if bees ever visited the blossom of the common red plum, and as these trees are now in blossom, I would be very pleased if bee-keepers would keep a look-out to see if they do work on the blossom of this particular kind of plum tree.

May I be permitted to correct your correspondent, Mr. C. H. Tomlinson, who on page 78 suggests Mr. W. Loveday is wrong as regards the song of the "missel thrush"? I contend that Mr. Loveday is correct in what he says. I also know that the missel thrush sings with greater vehemence before a storm. This same bird is also known by the names of the "storm thrush" and the "screech thrush," all of which names refer to the same bird. It is also the largest song-bird in the world.

I have seen several devices for opening saw-cut in top-bar of frames to allow for insertion of foundation, but the best and most simple way, to my mind, is to use a small joiner's cramp and pinch the two ends together and it will open beautifully, and there is nothing in way of foundation.—JAS. SKINNER, Bristol, April 28.

SLOW-FEEDING IN SPRING.

[5518.] May I be allowed space to say that, to my mind, the nearest approach to a perfect slow-feeder (long a desideratum in the apiary) has been attained by the one advertised in your pages as the "Wilkes" Feeder? The idea long since occurred to me that this would be best effected through the lubricator principle, and I find in my recent practice that this principle, as applied in the "Wilkes" Feeder mentioned, works out admirably. As success in many matters depends upon close observation, I may here state that I always strain the syrup when hot through some suitable material that removes all the fine insoluble matter which will, accidentally or otherwise, find its way into it, and which would possibly choke the feeder outlet and, consequently, require watching.

With the above precaution, it seems to me that failure cannot ensue.—M. S., King's Norton, April 16.

A BEE-KEEPER'S COTTAGE.

A PICTURE OF RURAL ENGLAND.

Deep in the country it stands, and far, very far, from the madding crowd (says a writer in the "Globe"). We leave the old riverside city by that western high-road which leads toward the distant Welsh hills; branch from this into the old road, one of those delightful "old roads" from which the roll of traffic has long been diverted, and where the grass grows between the ruts, and hedges and trees regard not the highway surveyor. We forsake this again for a by-lane, and that in its turn for a grassy bridle-path, by the side of which a brook sings merrily under the luxuriant hedge-bank, and arrive at length where the cottage stands basking in the afternoon sun which is stooping toward the blue hills on the south-western horizon.

Low the cottage is, and built of some unseen material hidden behind many a coating of warm, yellow plaster. The wide eaves show the vast thickness of the oft-renewed thatch, from the slope of which

two tiny semi-circular bedroom windows peep at us with half-shut, sleepy eyes. A lozenge-shaped pattern of mathematical regularity, worked with the thatching-cord, runs round the lower edge of the smooth straw. On the broad sills behind the lower casements is a blaze of scarlet geraniums—two bright spots which strike the eye amid the soft tones of the little house and its surroundings. On either side of the path which leads from the front door to the garden wicket stand orderly rows of hives—thirty "stocks" in all—with just room between each to allow of the necessary examination and manipulation. In the narrow border under the hedge of shining privet are the flowers of our grandmothers' days—the ten-week stocks, the clustering white pinks, with many a fragrant gilliflower—bright yellow and deep, velvety brown. And from within and around the hives rises the deep hum which tells of a vast and busy city. Beside the garden hedge, and beneath the branches of a spreading lime tree—where the bees will be clustering round the luscious blossom a few weeks hence—another gate leads into the yard, where a half-open door shows a workshop, near which a chained collie pup is stretched at full length on the warm dust of mother earth. Then the bee-keeper comes out at a side door and makes us welcome.

A tall and "proper" man he is, with that quiet deliberation and seeming slowness of movement which is half the battle in the handling and care of nervous, excitable creatures. His soft brown eyes are those of one who finds his little world a very pleasant one. While he talks he lights a piece of cotton rag, drops it into a tin tube fitted to a miniature pair of bellows, and, after a puff or two to see that all is in working order, leads the way into the front garden. As we follow he tells us how a bee, gorged with the day's honey-gathering, is a creature willing to be at peace with the world, and quite ready to make itself agreeable even to chance callers. Notwithstanding this assurance, it is a rather breathless moment, that in which our friend lifts the first roof from a hive and shows to our doubtful gaze the row of wooden sections crowded with clustering insects. A puff or two from the bellows, however, and all but a few stragglers disappear within the walls of comb. Then with a sure and steady hand a section is lifted from its place and held up, that we may view its thousand inmates, who, at the first breath of the dreaded smoke, have hastened to prepare for what may be coming by gorging themselves with honey. Unroofing one here and another there, the daily business of the hive is shown, and when the last roof is replaced we turn, not without a silent sigh of relief, to other details.

The contents of the little garden, the wallflowers, stocks, and pinks, all have a share of attention from the honey-gatherers. But after watching a few moments, it is clear that these are but a minute proportion of the thousands that come and go every moment to and fro from the hives. Equally clear is it that, to-day, at any rate, it is on one aerial highway alone that the main army of the little foragers is travelling. As a bee emerges from the tiny doorway and rises into the air from the wooden ledge before it, there is no pause, no hesitating indecision. Save for the few that are trifling in the garden there is one route for all—over the hedge of privet, across the grassy lane, and away beyond the broad meadow, where the white-faced cattle are feeding knee-deep in herbage—there is clearly a known goal in view. The bee-keeper points to a gentle slope a mile away, where in a large field the green of some crop is thickly powdered with white. "Thirty acres of white Dutch clover," says our friend, with a look of exultation in his eyes, "the finest thing in the world for bees—you just taste my honey this autumn." And then comes the explanation of how the tiny "sucker," or proboscis, of the little domestic bee is powerless to reach the honey deep hidden in the common red clover of English fields and pastures, though the great trunk of his brother, the "bumble-bee," attains the treasure with ease; and how, nevertheless, the farmer, having his thoughts intent on other stock than bees, prefers the red-clover as bulking larger in respect of fodder. Hence the bee-keeper's jubilation at the appearance of such a welcome crop in his neighbourhood.

The sun is dipping now below the hills, and the fowls in the orchard behind the cottage are mustering at the gate in readiness for their evening meal. They are well-bred buff Orpingtons, and a thriving lot, but the bee-keeper listens to our approving compliments with an entire absence of that enthusiasm which he gives to his bees. "Hungry things—look for me to feed 'em twice a day all the year round. Now, the bees never ask for more than a drop of syrup in the early spring, but just get their food from the neighbours and carry it all home to me. That's the breed of poultry I like." The workshop is packed from floor to ceiling with the implements of his trade. Hives complete—save for a coat of paint—and in full working order for the next enthusiastic visitor who would fain write himself apiarist; hives in every stage of incompleteness; stacks of wood seasoning in the yard. A roomy van is stowed away in an adjoining shed, and when the spring comes round once more the bee-keeper will harness his white horse and drive leisurely

(*Continued on page* 176.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

The apiary seen below along with its owner belongs to a bee-keeper of the persevering sort, who is not deterred by a few failures owing to mischance. His "advice to beginners" may be usefully taken to heart, though we hardly go so far as waiting for "a yield of half a ton of honey before seeing a queen bee." For the rest, his interesting "notes" need no addition from us beyond a word of thanks for his appreciation of the help he has had from our JOURNAL after ten years' reading. He says:—

"I commenced bee-keeping at Nottingham in 1894, and like many other beginners I bought my first stock in the autumn instead of spring. The stock in question consisted of about half a pint of bees in an ill-fitting frame-hive, with practically no food in stores. As might have been expected, the bees died before Christmas, and, having been taken in through ignorance, I determined that this should not occur again.

I therefore began taking the BEE JOURNAL, and read 'Modern Bee-keeping,' and all other bee books I could get hold of. Thus prepared, I made another start the following year on right lines, and succeeded in getting together a nice little apiary; when disaster overtook me in the shape of a regular flood. My bee-garden was three miles from home, and I had put the hives in a hollow for shelter, and weighted them well down. Then we had a heavy fall of deep snow, followed by a sudden thaw, and, later on, heavy rain, which drowned the lot! Nor did this end my troubles. In the following spring I ordered two more swarms. One turned out queenless, the other arrived when I happened to be away from home, and was left next door till my return. My neighbour, seeing a few bees escaping, promptly covered them over with a big hearthrug, and stifled the lot! My wife now urged me, with some show of reason, I will admit, not to go in for any more bee-keeping; but being fully conscious that this chapter of accidents was not due to any lack of adaptability on my part for bee-keeping, I felt more determined than ever to have another try. That year I removed to my present home, and laid down the lines upon which I intended to work in the future.

The main feature was to adopt an inexpensive frame-hive that would answer my purpose, from a practical point of view, equally well with a more costly one.

MR. G. W. NOBLE'S APIARY, POTTON, SANDY, BEDFORDSHIRE.

I am indebted to Mr. E. J. Burtt, of Gloucester, for advice as to details. The hive consisted of movable floor-board without legs, double-walled brood-chamber at sides, eleven inch lift with deep roof giving twenty inches of supering room.

I contracted to have them cut for me from ½ in. wood, and had them delivered in the flat. I put them together myself, felted the roofs, and tarred them all over except the fronts, which are painted. I keep all the hives tarred and painted every year. I ordered my shallow frames by the gross, cut with a shoulder instead of using metal ends. They are spaced wide so that

seven take the place of ten ordinary-sized ones. I have used full sheets of foundation from the commencement, and stocked my hives by driving cottagers' bees for them, and taking the bees for my trouble. I also purchased some skeps cheap at the end of the season, so that altogether I had an apiary of over forty hives in 1901, which yielded 1 ton 3 cwt. of extracted honey, besides two gross of sections. That year I paid to a London firm £10 for glass honey jars.

Having left my situation as journeyman tailor about this time, my bees enabled me to commence business for myself. I have now plenty to do, but can find time to give a helping hand to my brother bee-keepers in the district, and to serve on the Parish Council, of which I have been a member for five years.

In conclusion, my advice to beginners is not to disturb your bees unless it is absolutely necessary. I had a yield of ½ ton of honey before I ever saw a queen bee. I consider that more than half of the troubles of beginners arise through trying to run before they can walk. The main points are to keep strong stocks in hives provided with plenty of supering room. Get the super on in time, pack warmly, and watch for the right time to get the next super on. Then, when the honey-gathering for the year is over, see that the bees do not starve in winter for want of a full supply of stores. Do not go in for novelties; do not experiment; keep to the beaten track until you are a bee-master in fact, as well as in name.

The photo was taken in the early spring of this year. My wife, who is a great help to me in the apiary, stands on the left, having just come out of the house after a considerable amount of persuasion. My self and faithful collie stand on the right. Only a portion of the hives are shown, which now number forty."

("*A Bee-Keeper's Cottage*" *continued from page* 174.)

away through the pleasant country-side, halting at villages and hamlets, where, in the school—or parish—room, and under the auspices of the County Council, he will give lectures and practical instruction to the farmers and labourers of the neighbourhood. So evident is his enthusiasm, so peaceful the scene under the soft evening sky, and so seemingly docile and submissive his myriad-headed little flock, that as we retrace our steps to the town by another way—there is always "another way" from such a cottage as the bee-keeper's—almost we are persuaded to renounce all else for the pleasant, loitering life of which we have had a glimpse.

Queries and Replies.

[3384.] *Fumigating Bees with Formalin.*—Can you please state whether if a piece of blotting paper were saturated with formalin and water mixture, and then rolled up with alternate sheets of dry blotting paper and put in the smoker, it would act just as well as the saturated wood or charcoal? Blotting paper, I may say, is a capital thing for the smoker in a dry state, if suitably rolled up in cartridge form.—W. J. FARMER, Truro, April 26.

REPLY.—When fumigating bees with charcoal there is no smoke, as there certainly would be if blotting paper was used. You may, however, try it, and we will be glad to hear the result.

[3385.] *Bee Nomenclature.*—Can you tell me if the enclosed insect is a bee? They frequent the same flowers as my bees, but are not as industrious, preferring to lie on the leaves in the sun. This is the second year I have noticed them, but I have never been able to find where they come from.—S. H. H., West Derby, Liverpool, April 30.

REPLY.—The insect sent is one of our wild bees (*Andrena fulva*). It is known as one of the burrowing or sand bees, making its nest in sandy banks.

[3386.] *Getting Bees Out of Trees.*—On our farm we have a number of strong swarms of bees located in hollow beech trees, and I would ask: Is it impossible to get the honey without destroying the trees? If I cut a hole in the back of a hive to correspond with the hole in the tree, and fastened the hive to the tree, so that the bees would have to pass through to go in and out, would the bees eventually establish themselves in the hive? I thought of using a frame-hive fitted with full sheets of wired foundation.—GEO. H. BROWN, Hants, April 15.

REPLY.—You cannot take honey from hollow trees without cutting away sufficient of the tree trunk to allow of removal of combs by cutting them out. With regard to securing the bees, your plan would not be likely to succeed, as the queen would refuse to take possession of the decoy-hive.

[3387.] *Doubling Stocks after Loss of Queen.*—May I trouble you for a word on the following in your next issue? I had a colony of bees in a frame-hive headed by an old and useless queen. I destroyed this queen, and put a colony with a young queen in a skep on top of the bar frames, hoping that these bees would transfer their brood-nest to the bottom. I now find (after a month) that they have not done so. I should be glad of a word as to whether I did the correct thing, and what further I

can do to secure this end, for I cannot put supers on the skep. Could I with advantage tie the brood-combs from the skep into frames and put below? I send name, etc., and sign—ENQUIRER, Suffolk, April 23.

REPLY.—If the usual precautions were taken with regard to making the lower hive as warm as possible, nothing more could be done. The delay in taking possession is caused by the young queen preferring the warmer quarters overhead. The brood-nest will be transferred below when room for egg-laying is needed. There is nothing but disadvantage in tying old combs into new frames. Have new combs built in the latter, as by far the best.

[3388.] *Giving Surplus-Room to Strong Stocks.*—Please let me know if it is too early to put supers on my hives? I notice I have a very strong colony, and all the frames seem very full, and, as you say in your last issue, there may be some new honey shown at the Guildford and "Park Royal" shows respectively, if this is to be the case people must soon begin. If you think it too early, please say when you advise it. The trees are all in full bloom. I send name and sign—G. L., Weybridge, May 2.

REPLY.—If bees are as strong as stated, supers may be given at once, but wrap as warmly as possible to guard against possible frost at night.

[3389.] *Unpalatable Honey as Bee Food.*—Can honey that has for years been exposed to the air, and which is too unpalatable for table use be made serviceable as bee-food? If so, how?—J. P. F., Cambs., May 2.

REPLY.—If the honey is not fermented, it will only need heating till melted, and then thinning down with hot water to the consistency of ordinary bee-syrup to be suitable for feeding bees at this season.

[3390.] *Bees Dwindling in Spring.*—I am sending you by this post a queen bee (alive), and should esteem it a great favour if you could tell me what is the matter with her. The stock was quite strong in bees at the beginning of March, but since then it has gradually dwindled away, and at the present time there are not more than 100 bees in the hive. There is a nice lot of honey in the brood-chamber, and the bees have had a cake of candy, but they have not touched it. There is absolutely no trace of brood, though the bees are bringing in pollen.—R. P. PIKE, Durham, April 24.

REPLY.—Judging by her appearance, the queen sent has never been mated, and was probably hatched out last autumn. This accounts for the rapid dwindling of the old bees as soon as active work for the year began. You may take it from us that the queen heading the colony last autumn has met with some mishap, and the queen sent was subsequently raised too late for mating.

[3391.] *Result of Spring Examination.*—On overhauling my five hives to-day I found in one of them three frames of brood, from which I have cut the piece of comb sent herewith. Will you kindly say: 1. If it is foul brood, and, if so, 2. Do you think it is of old standing? 3. Is it likely to affect the other hives, and have I done right in destroying the three frames and combs and putting bees in new hive on new frames filled with foundation after spraying remaining brood and combs with phenol? I send name, and sign—ANXIOUS, Tavistock, April 30.

REPLY.—1. The comb sent shows rather a bad case of foul-brood. 2. As all larvæ we have to judge from were hatched from eggs laid probably within the last two or three months, we cannot say if the disease is of old standing. 3. Yes, under the circumstances; but you would have a better chance of success if the stock could have a young and vigorous queen given to it in lieu of the old one.

[3392.] *Reversing Skeps for Supering.*—I would be obliged for your idea on the following: 1. I am advised to put a strong stock in a skep, bottom-up, with queen-excluder and section-rack above. As our honey-flow comes soon, is the above-named plan likely to give good results? 2. Do you approve, and how would it affect the honey and brood in the skep? Kindly reply to—M., Windermere.

REPLY.—1. We have not a word of approval for the proposed plan, and would on no account advise its adoption. 2. The above reply covers your second question.

[3393]. *Transferring from Skeps to Frame Hives.*—About three weeks ago I placed a skep of bees on the top bars of a frame hive for the bees to transfer themselves below, and as I do not yet understand much about modern management I shall be very much obliged for a reply to the following questions through your valuable journal:—1. Is there any chance of my getting section honey from this hive this season, or shall I leave the skep where it now is till the end of the season, and then remove it? 2. If you would advise removal, shall I take it off before the honey starts coming in, or let it remain till end of the season? 3. If I must remove it soon, please say when and how to do it. Thanking you in anticipation, I send name for reference, and sign—A BEGINNER, Nailsworth, Glos., April 28.

REPLY.—1. If bees have transferred their brood-nest below, and skep may be removed when all the brood in its combs has hatched

out, and sections may be given when honey is coming in freely. 2. The skep must not be removed till the transferring is complete, as stated in reply to No. 1. If it is left on, the bees will store honey in it after brood has hatched out. 3. The above replies must guide you as regards removal.

[3394.] *Examining Hives in Spring.*—If the present fine weather continues, I propose examining my hives, and ask:—1. Is it too soon yet? 2. Must I use the smoker, seeing they are living on candy and cannot take in honey? 3. The bees are carrying in a large quantity of pollen. Does this signify for a certainty that a queen is in the hive? 4. The bees in one hive are throwing out the candy. As this is the same as the other hives had, is it not strange? And why is it? The other hives have not thrown theirs out. 5. Should the candy be taken away? 6. Is it too early yet to uncap the combs?—Rac, Cardiff.

Reply.—1. Bees can now be examined on any fine day. 2. Yes. 3. Pollen-carrying is good evidence that breeding is in progress. 4. If all candy is alike, it is "strange." 5. Candy is not suitable bee-food in May. 6. You may uncap at once.

[3395.] *Transferring Bees to Frame Hive.*—I have recently gone into the country to live, and have started bee-keeping, and as I find the Bee Journal a great help in many ways I shall be glad if you could reply to the following query in its columns, as it might be of help to other novices as well as myself. A few days ago I bought a stock of bees in skep, which seemed strong in numbers and working well. I wanted to transfer them from skep to a frame hive, so after allowing them to rest after their journey, I placed the skep bodily over six frames containing wired foundation, and placed slow-feeder over skep, the whole being contained in hive with roof on, and intended to allow them to transfer themselves, as instructed in the "Guide Book." I now propose to add four more frames of wired foundation, place queen excluder over frames, drive bees from skep until I have secured queen, and place them in bottom of frame hive, then replace skep over frames to allow remaining brood to hatch out. I have been told I am not acting quite rightly. Can you advise me? The skep is still over the six frames enclosed in the hive, and the bees seem to be working well. Should I do harm by carrying out programme as above delineated? I send name, etc., for reference, and your kind reply will be much appreciated.—A. B. C., Snainton, Yorks, April 29.

Reply.—Adhere to instructions in "Guide Book." The plan you propose to follow is liable to end in disaster to the queen. As the bees are stated to be "doing well," leave well alone, and when the queen is breeding in lower hive, and brood in skep has hatched out, then begin to think of driving bees from skep, if desirable, but not before.

[3396.] — *Uniting Queenless Bees.*—I have a stock of bees in a frame hive, which I think is queenless, and I have also a lot in a skep that I want to put with them. Will you kindly tell me how to proceed? I only want to join the bees in skeps with those in the frame hive in order to re-queen the frame hive. I have the "Guide Book," and so ask:—Will it do to follow the instructions given therein at this time of the year? Reply in the Bee Journal will oblige.—J. P., Stokenchurch.

Reply.—Follow instructions in "Guide Book," and all will go well.

[3397.] *Moving Bees. — A Beginner's Queries.*—I intend going in for bee-keeping, and am working up modern methods of management, as far as one can acquire knowledge from reading Mr. Cowan's "Guide Book." I see there that you very kindly offer to give information to beginners. I have no bees at present, but a neighbour (about 200 yards from here) offers me a colony of bees. He says they did not swarm last year, and I can have them for a very moderate price (12s. 6d.) I therefore ask:—1. If the old stock can be moved here at once, and, if so, how? Would there not be a great danger of them returning to their old home? 2. Would a stock that did not swarm last year be considered a good one to begin with? I could leave the stock in its present position until it has swarmed, if that would be advisable, but before deciding what to do I should be very grateful for your opinion on the matter.—A. R., Dorset, May 2.

Reply.—1. You had better allow the bees purchased to remain where they are, and when the bees swarm, hive the latter in your own garden. You might then remove the parent hive, and set it some distance away from the stand on which the swarm is placed. 2. Fairly so; but a swarmed stock would be better as being headed by a queen of 1903.

[3398.] *Dealing with Diseased Stocks.*—I have got thirty stocks of bees, mostly in frame hives, and a few of them are affected with foul brood. I noticed three lots very strong with brood on ten frames and on the point of swarming, but I found about a dozen cells affected in each hive. I dropped carbolic acid in each cell with a match as a precautionary measure, and ask: What would you recommend should be done with them? It seems a great pity to destroy such a lot of brood. If you think it best to destroy the lot instead of

trying to cure, please wire me to that effect. A neighbour of mine had three hives about 50 yards from my apiary which were rotten with foul brood; one could smell it before opening hive. I bought the lot and destroyed them by burning last summer. Mine were healthy enough the first summer, I had them three years ago. They were examined by a first-class expert. Thanking you in advance, I send name, etc., and sign—A. G. C., South Lancing, April 30.

REPLY.—We advise no destruction of brood. Allow the bees to go on as they are after the precaution already taken. If the queen is a good one, as seems certain from present conditions, the stock may do well, notwithstanding the few diseased cells. You can tell better when season is over whether destruction is advisable.

[3399.] *Making the "W. B. C." Hive.*—I have been making some "W. B. C." hives according to instructions given in the "Practical Note Book," but there are some points which I do not quite understand, and which I should be grateful if you could explain. 1. Supposing the brood-nest be contracted to, say, six frames, what is to prevent the bees from getting in the empty space between the dummy-board and side of body-box? Contracting the entrance of the hive will not do this, as once the bees are inside the outer case they have free access to any part of the body-box, the sunk entrance of the hive stretching the whole distance across the body-box. 2. Would it not be advisable to have a strip of wood across the entrance, flush with bottom of and between body-box and outer case, to prevent bees getting in the empty space between the two? Or will the bees go straight in without attempting to get between? Thanking you in anticipation of reply, I send name and sign—SARNIA, Guernsey.

REPLY.—1. The trouble you foresee will not arise at all unless the bee-keeper leaves the bees to go on as they please without any control or looking after. They will not use the vacant space outside the dummy unless pressed for room, which will be allowed in due course when needed. 2. Many bee-keepers use a bridge-piece such as you name; indeed, most good makers provide one for all hives sent out.

Echoes from the Hives.

Barnwell, May Day, 1904. — We are having some very favourable weather now, but I have not seen any drones on the wing yet. My bees have been very busy on the flowers of Box-trees. We have a shrubbery a few yards from the house consisting chiefly of box-trees, and they are simply covered with bees. I am most grateful to your contributor, "D. M. M., Banff," whose letters, I think, are far more useful and interesting than what seem to me to be merely unnecessary criticisms. I send name for reference.—W. A.

Uttoxeter, Staffs., April 23.—The season of 1903 was a very poor one in this district, for, unlike many localities, we had no rain scarcely from early in May, until after mid-July, and herbage of all sorts was dried up; consequently only a little honey was obtainable, but when the rain started it rarely ceased until well on in this year.

As the queens in most of my hives were old, and stocks large, I killed queens in nine hives about August 1, and allowed them to re-queen themselves. This they did, but only three reared any brood. Three queens laid a few eggs, but they were never hatched, the others, so far as I know, did not lay at all.

The queen, with about half the bees in one hive, flew away as a swarm in September, and I saw no more of them; but, later, another small lot was joined to them.

Under these circumstances I was anxious to find out how they would turn out this spring, and have been gratified to find that all are well, with increasing brood-nests. Several began to rear brood very early, and during the past few days the strong-smelling honey from gooseberry bushes has been brought in, and can be perceived yards away.

I have noticed in other years that the first patch of eggs laid by a young queen may be weeks before they are hatched, even in hot weather, but I do not understand why this is so.

I am glad to say this district, although not a good one for honey production, is still free from foul brood, but bee-keepers here have been careful not to import bees from other districts.—THOMAS HARPER.

Obituary.

MRS. WM. WOODLEY.

We deeply regret to record the death of Mrs. Woodley, who passed away peacefully on Tuesday, April 29, at her residence, Beedon. Mrs. Woodley had not been in good health for about three years past, though her indomitable energy and love for work among the bees kept her up when many would have given way. In a letter before us our bereaved friend expresses his regret that his usual "Notes by the Way" are not sent, and all who read these lines will share our sorrow at the cause, for Mrs. Woodley was a model bee-man's wife, and

no one is more ready to acknowledge her share in such prominence as her husband has attained in the bee world than Mr. Woodley himself, when he writes: "Her removal will make a great void in my life, how great time alone can tell."

We tender to him our heartfelt sympathy which will be shared by thousands of bee-men to whom the name of William Woodley is a household word.

WEATHER REPORT.

WESTBOURNE, SUSSEX,
April, 1904.

Rainfall, 1·59 in.
Heaviest fall, ·34 on 12th.
Rain fell on 13 days.
Below average, ·10 in.
Sunshine, 178·5 hours.
Brightest day, 17th, 12·5 hours.
Sunless days, 3.
Below average, 12·5 hours.
Maximum temperature, 65° on 20th.
Minimum temperature, 33° on 11th and 22nd.
Minimum on grass, 23° on 26th.
Frosty nights, 0.
Mean maximum, 55·9.
Mean minimum, 40·9.
Mean temperature, 48·4.
Above average, 2·3.
Maximum barometer, 30·30 on 2nd.
Minimum barometer, 29·48 on 15th

L. B. BIRKETT.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 7 to 10, at Guildford. — Royal Counties Agricultural Society's Show. Bees, Appliances, and Honey Department, under the management of the Surrey Bee-keepers' Association. Twenty one classes. Schedules from F. B. White, Hon. Secretary, Marden House, Redhill, Surrey. **Entries close May 14.**

June 21 to 25, at Park Royal, London.—Royal Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A. Increased prizes for B.K.A. Associations as arranged in divisions or groups of counties. Schedules from Edwin H. Young, Secretary, 12, Hanover-square, W. **Entries close May 16.**

July 14 and 15 at Grimsby.—Show of Honey Hives, and Bee Appliances in connection with the Lincolnshire Agricultural Society. Bee Department under the management of the Lincs. B.K.A. Fourteen classes. Liberal money prizes and silver medals. Schedules from R. Godson, Hon. Sec. Lincs. B.K.A., Tothill, Alford, Lincs **Entries close June 14.**

August 4, at Kingsthorpe, Northants.—Honey Show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar of honey (*Entry free.*). Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Hon. Sec., Kingsthorpe, Northampton. **Entries close August 1.**

August 30, at Cartmel, Lancashire.—Honey show in connection with the 32nd Annual Show of the Cartmel Agricultural Society. Three open classes for Comb and Extracted Honey (prizes, 15s., 10s, 5s., and 2s. 6d.), and Beeswax (prizes, 10s. and 5s.), along with silver and bronze medals of the Lancs. B.K.A. Schedules from W. Cragg, Secretary, Cartmel, via Carnforth. **Entries close August 18.**

Notices to Correspondents & Inquirers.

EVELYN (S. S. B., Sussex).—Soluble Phenyle Solution. — The component parts of soluble phenyle are known only to the firm who manufacture it—viz., Morris, Little and Son, Doncaster.

D. L. JONES (Suffolk).—Transferring Bees. —The word "extractor," as used in the edition you refer to, was a printer's error, and has been altered to "excluder" in the last two editions.

F. BUNDY (Nursling). — Joining B.K. Association.—The Hon. Sec. of the Hants B.K.A. is Mr. G. H. Bellairs, Bransgore, Christchurch.

C. LEAL (Cornwall).—Moving Bees Short Distances in Spring.—You would be certain to lose bees by moving the hives to other side of your garden at this season. As it is merely a matter of more sunny aspect, we should defer removal till next winter, when, after bees have been confined indoors for some weeks by frost they may be moved without risk.

R. F. S. (Formby).—Queen Not Laying in April.—Queen was alive when received, and, to judge by appearance, was a fine, matronly-looking one, with no perceptible indications either of old age or non-fertility. We cannot understand her not laying unless the stock was so weak as not to be able to raise the temperature of the hive to brood-raising point.

Suspected Combs.

W. H. HUDSON (Ipswich).—Nothing wrong with comb; the cells contain only pollen, a little of which has become mildewed. Comb is clean, fresh, and wholesome.

L. B. (Workington).—The little patch of brood in the large piece of comb sent is not a suitable sample for judging from. You should send not more than two inches of comb, with some remains of dead brood in the cells. Send sample in an old mustard tin, with letter *outside* the tin, when we will help you if we can.

P. M. (Farnborough).—No sign of disease in comb.

Special Prepaid Advertisements.

Twelve words and under, Sixpence; for every additional Three words or under, One Penny.

WANTED, Second-Hand GEARED EXTRACTOR. Best cash offers to H. CRITCHLEY, Chalford.

28TH YEAR. Book early swarms and Queens now. ALSFORD, Expert, Haydon, Sherborne. A 52

"WORK" 393 to 735, two missing; Sale or exchange. W. HOCKIN, Victoria-square, Holsworthy.

SWARMS WANTED in May and early June. State price delivered. WOOD, Bottisham. A 42

BEE-VAN, well furnished, for HIRE on reasonable terms. Apply, Hon. Sec. Berks B.K.A., Reading.

GOAT, Sale or Exchange, particulars, *B.B.J.* April 21. MUNDAY, Cavendish-road, Leicester. A 51

Editorial, Notices, &c.

THE "ROYAL" SHOW.

"ENTRIES CLOSE MAY 16."

Our sub-heading, quoted from front page of this issue, will remind readers of the few days still open for making entries, and as we have during the past week received letters approving of the non-use of the purchase clause, the schedule, it may be assumed, that bee-keepers owning only a few hives and consequently have a very limited output of honey from which to select exhibits, will welcome the decision announced on page 171. On the other hand, the weather—so promising when we wrote last—suddenly changed for the worse, but now has again become warm and seems likely to continue so, in which case the slight check will not seriously interfere with the chance of honey of 1904 being available for the show. There are still five weeks before us, and bee-keepers know what is possible for bees to do in that time, surrounded as they are on all sides with abundant honey-producing forage, from which to secure a plentiful ingathering before the "Royal" opens. We need only add a final word to say the closing day for entries is Monday next, the 16th inst.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of April, 1904, was £3,575.—From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

AMONG THE BEES.

IN A GARDEN.

[5519.] Our present Poet Laureate, in the "garden that he loves," believes in having bees to complete its full equipment. Just about 300 years ago Lawson, after singing the praises of Garden and Orchard, came to the same conclusion: "One thing, in my opinion, makes for ornament as much as either form, or cleanliness, or flowers—which is bees." The poet says: "A garden is a lovesome thing God wot"; and a recent writer sends an inexpressible thrill of gladness to the heart in his exquisite description of a garden in a sunnier clime than ours. It has mimosa powdered with fresh gold, hyacinths, tulips, irises, jonquils, violets, blossoming peaches, and almonds. "The air was sweetened by many incense-breathing things besides violets—by moss and bark, the dew-laden grass, the moist earth; and it was quick with music. Bees hummed, leaves whispered, birds called, sang, gossiped, disputed, and the river played a crystal accompaniment." The full description is exquisite, but would be incomplete without the bees.

The Coltsfoot.—In a late contribution I mentioned this flower as an important one in early spring, but since then note that others set even a higher value on it. One writer says: "The Alpine Coltsfoot affords a great quantity of honey, the scent of which is diffused to a considerable distance." Darwin mentions having counted on these plants, besides bees of various kinds, upwards of 200 painted butterflies, which gave the plants the appearance of being loaded with additional flowers. Dr. Evans, in his poem on "Bees," says:—

> "When o'er her nectared couch papilios' crowd,
> And trees in clusters hum their plaudits loud."

Another writer describes the scene in poetic prose as follows:—"What brings the bees buzzing around so busily? See, it is the Coltsfoot, which they approach with a harmonious chorus somewhat like the Non Nobis Domine of our singers, and, after partaking silently of the luxurious banquet, again set up their tuneful pæan." Close observation leads me to the conclusion that under favourable circumstances the flower does yield a fair amount of nectar to the bee.

Light-weight Sections.—An eminent bee-keeper, in recording his take of several thousand sections, showed that they averaged only $14\frac{3}{4}$ oz. I am much surprised that anyone carrying on the pursuit on a large scale should not see the very great advantage of increasing the width of his sections the small fraction of an inch, which would make all his surplus comb honey weigh (practically) 16 oz. to the pound section. In selling them, I fancy, he would be paid so much per pound, but I question very much if the retailer would be so strict in handing them over the counter, so I expect a tidy little profit would be reaped out of the deal—at the cost of the consumer, of course. I have already called attention to this point, and I trust bee-keepers in this country will not introduce this undesirable innovation, which will not be to the advantage of the craft in the long run. Our orthodox section turns out as near a pound of honey as we are ever likely to secure, and this all sections should weigh.

Young Bees.—An impression prevails that the elder bees show great kindness and

attention to the young. My own observation leads me to a contrary conclusion. They bestow care on the egg from the moment it is deposited in the cell, and seem to act on some definite plan in arranging its position. From the moment of hatching they give it the most assiduous attention, and feed it carefully from day to day until the moment when they seal it up to undergo its wonderful metamorphosis. But from that period it receives no fostering or maternal care, nor even a nurse's aid and guidance. It spins its own cocoon, and is self-sufficient until it eats its way out, by the aid of its own sharp pincers, from the cell in which for nine days it is hermetically sealed. No helping hand is held out to it even then, for almost from the first moment of its fully-developed existence it becomes a labourer in a special sphere. On emerging from its cell it is incapable for an hour or two of much motion, and rests near its cradle, being often trampled under foot by the bees who, in their incessant energy, come in a steady stream from the fields. If it obtrudes itself on their line of march they simply disregard its existence, and ruthlessly hold on the even tenor of their way. In a very short time it sips from the nearest open cell, while at a very early period it proceeds to manufacture the chyle food its special set of glands so eminently fit it for preparing and administering to the just-hatched larvæ.

Mr. Gray's Hive.—The inventor of this hive very kindly offered to forward me a specimen for trial and experiment during the coming season, so that I might report on it after testing it in actual use. The offer was a generous one, and I have to return my best thanks; but as so limited a trial would not be a fair test of any hive I would prefer not to take advantage of his obliging offer. A full description in the Bee Journal, so that several could give it a fair trial, or an account of the results already secured alongside of other orthodox hives, would be more beneficial to the fraternity as a whole. Would Mr. Gray give us the desired description?

"*Nothing New under the Sun.*"—I am led to the following thoughts by a sentence in "Notes by the Way," page 115:—"Every week the B.B.J. comes to hand with something interesting, if not new." Nowadays every month produces reams of prose and poetry, every thought and fancy of which have already been expressed; and, of the almost innumerable books published annually, few contain more than a rearranging of ideas and sentiments which have already done duty, although the concatenation and correlation of thoughts are placed in a new light. Take the most original writers of our times, and "strip them of what they owe to their predecessors, and a terrible reduction would have to be made," says an ancient litterateur. Another says: "Wynton wrote his 'Original Chronicle,' but made no claim to the spider sort of originality. His book, he meant, went back to the *origo*, the beginning of history. He was frankly a borrower, but a *bee-borrower*, digesting and improving all that he culled. The new is not always the true, and most certainly the true is not always new.—D. M. M., Banff.

GOLDEN ITALIAN BEES.

ARE THEY AS HARDY AS BLACKS?

[5520.] Referring to the question: Are golden Italians as hardy as blacks? may I be allowed to relate an instance of their hardiness which has recently come under my notice here, in Philadelphia, where the past winter has been unusually long and severe, with the thermometer many times below zero? On September 13 I left home with my son and his family for a visit to Colorado and California, the house being shut up. At the back of the house, under a lean-to roof supported by posts, but open in front, were two colonies of golden Italian bees in eight-framed dovetailed Langstroth hives, with supers of shallow frames, the latter being partly filled with honey. The supers were left on, as the fall honey-flow was just beginning when we left. The bees had no additional packing of any kind. On my return in the following February it was still freezing, with snow on the ground. On looking out to see how the bees had fared, I found one colony had been stolen, and the other hive had the roof and quilts off, and the bees, which were all in the super, were entirely exposed to the severity of the weather, clustering between and above the frames. The morning was fine and sunny, and, the bees just showing they were alive by a slight movement, I put on quilts and the roof, deferring a complete examination for a more suitable occasion. At the beginning of March we had a few mild sunny days, and the bees were able to take a cleansing-flight, and I got the chance to make a thorough examination of the hive and its contents. I found, to my surprise, a small patch of sealed brood in the super, and saw the queen moving about quietly. There was at least twelve to fifteen pounds of honey in the hive and super. This queen I had from Mr. Pratt last summer. She was reared in a "Swarthmore" cell-cup and mated from a small hive containing about two hundred bees. This experience satisfied me that golden Italians are as hardy as black or any other kind of bees, however reared. The wintering of bees, in my opinion, depends on the strength of the colony in young bees, and an abundance of natural stores of honey within their reach.

A lot of additional packing is, to my mind, unnecessary. The entrance should, as in the above case, be open the whole width of the hive. Dampness in the hive, caused by faulty roofs, or by the use of impervious covering on the frames, is, I believe, the chief cause of dysentery, spring dwindling, and loss.—JOHN M. HOOKER, 4,422, Chestnut-street, Philadelphia, U.S.A.

CONCERNING SUNDRY MATTERS.

[5521.] I see that the question of bee forage is under discussion; I have never seen the strawberry flower mentioned as a source of honey. The bees certainly work on it, but I am unable to trace whether it is any use as a honey plant. I should be glad of definite information on this point, as there are many acres of strawberries in this district.

Do bees get any stores from the lilac? My own time for observation is at present limited, and an opportunity has not recently occurred for personal investigation.

I am also rather puzzled with the natural history of the wax moth. Last year I purchased some bees in skeps, the queens of which have proved to be about as good as could be got, but the wax moth was plentiful in the skeps, and though down in the hive body, they make no headway. I find that maggots of great size are constantly appearing just over the quilts. Now, where do they come from? There are certainly none in the combs, there is no food above the quilts for them; whence, then, comes their nourishment? I put away a lot of shallow frames last autumn, on looking at them recently I found that these maggots had made burrows just at the midribs of the combs, a silky passage marking their track, apparently full of eggs, but I do not understand maggots laying eggs. I should think the adult moth would do that, yet I very seldom see a moth about, and the moth certainly could not make these burrows. Not much damage has been done so far, as only a few of the combs were affected, and in parts only. Of these I have cut out the affected parts and sprayed all with disinfectant, so I hope to get rid of them. I am going to use floor cloth for quilts, which the moth or maggots or bees cannot possibly eat through, and this should further keep them down. They are very destructive amongst empty combs. I find their cocoons in various crevices, these I have all destroyed, presumably the moth comes out of these. I should be glad of a little definite information on these points.

Up to the last week the weather here in Cornwall has been excellent for bees. Two of my stocks would possibly have swarmed had I not removed some combs of brood and bees from them to a weaker stock. These two lots were as full of bees as if it had been midsummer, and queen cells had been started. These I have not removed, as I wish to make some nuclei from such excellent queens. For the past week, however, the weather has been too cold to open them up, and I fear that a fine day will bring out a swarm before I get time to prevent it, as they are simply packed with bees on ten frames. My plan has been to leave only enough food exactly to keep them going, so that when the breeding season commenced all brood cells were practically empty and ready for egg-laying. This, and splendid queens, accounts for the large populations. Food I have supplied in the open air by taking full combs from those colonies that had too much and letting the bees clean them out. Thus I have no old stores on hand to granulate in the hives. The pollen-clogged combs have had the pollen cells all cut out, as bees get more than enough of fresh pollen daily, and the cells are required for brood. My remaining colonies are of good strength, they were only driven lots or casts, and consequently not very forward when packed up for the winter, but within a week or two they will be of full strength, and I hope for a good time later on. All my hives have been washed outside and in and disinfected, and have had a coat of paint outside. The roofs have been covered with thin lead, similar to that used for lining tea chests. It is very cheap, and effectually excludes wet; but it must not, of course, be scratched or used roughly, but with ordinary care it should last for years. I used it on the recommendation of a writer in the BEE JOURNAL and find it a good thing.

As regards fixing foundation in frames with a saw cut, I noticed a good dodge in use recently. Instead of forcing the sides of the top bar apart, one of them was cut through with a knife at the side, the two parts opened, and then after insertion of foundation, tacked together. Personally, I use frames which allow of the top bar being bent back, frame being sawn three-quarter way through to admit of this being done, as in Meadows' registered frame. The foundation being further secured with fine oval nails. Weed foundation holds well.—W. J. FARMER.

BEES AND HAZEL CATKINS.

[5522.] Notwithstanding what your correspondent, James Skinner (5517) says to the contrary in this week's BEE JOURNAL, I still maintain and reassert what was written in my letter about Bees and Hazel Catkins, appearing in the JOURNAL dated March 31 last, and confirmed by "A Lover of Bees" in the JOURNAL for April 21. If I were James Skinner I would not be *quite*

so sure in the matter. He says: "They (the bees) would serve no useful purpose" in gathering pollen from the male bloom of the nut hazel, "because they would not first visit the catkin and then go to the tiny blossom," and, further on, that the pollen grains are so small that it would take them many days to gather a load worth taking home. I agree with neither proposition; but if James Skinner will open the debate early next season, I will promise on my part to gather all the information I can by close observation and otherwise, and assist him to come to a *right* conclusion. Cheshire's "Bees and Bee keeping" (Scientific), which lies before me as I write, says—speaking of the common hazel—"The necessary abundance of pollen, since so much is inevitably wasted, gives an excess, of which the bees take advantage; and often, in the early spring, the stocks are greatly helped by the catkins." Cheshire wrote that, and as he knew a thing or two, and as I am in such good company along with our friend from Yorkshire, "A Lover of Bees," so far as I am concerned the matter is adjourned until next February, shall we say, as I have more than sixty hives overflowing with bees which must be attended to now.—J. R., St. Albans, May 7.

[There is some misunderstanding on the part of our correspondents with regard to hazel bloom. Mr. Skinner says bees do not gather pollen from the catkins, and "J. R." maintains that they do. There is no doubt at all about bees gathering pollen from the male catkins of the hazel, but they do not do so from the female blossom (which is sometimes called *female catkin*). The hazel is anemophilous, *i.e.*, wind fertilised, and does not depend on insects for fertilisation. The male blossom, which produces the pollen, is in cylindrical catkins, with broad, sessile scales, and eight stamens, the anther-cells bursting when ripe and scattering the pollen. The female flowers (or catkins) are very small, and form a sessile bud, with closely packed crimson scales, and two flowers within each scale. The male catkins being above, on their being put in motion by the wind, the pollen drops on to the female blossom and fertilises it. Mr. Skinner is quite right, if he means that bees do not visit the female catkins; and "J. R." is correct if he means bees collect from the male catkins.—EDS.]

[5523.] I have never seen bees myself working on the catkins of the hazel, but reasoning from analogy, I should be quite prepared to admit the truth of the affirmative statement as made by reliable observers. In dealing with Nature one cannot be too careful or too chary of dogmatism. The contention of your correspondent Mr. Skinner (5517, page 173), that bees do not gather pollen from the hazel because fertilisation would not be effected unless they visited the female blossom as well, is untenable, as I will show by a similar example.

The hazel and the dog's mercury are both considered—and reasonably so, I think—as wind-fertilised plants. The former has the male and female flowers on separate parts of the same individual, while dog's mercury bears them on separate plants. In both cases the blooms containing the pollen hang out freely to the wind, which at the season of their maturity is usually of a strong and gusty character; the stigmas of each are also formed and situated favourably for receiving the pollen as it is blown by the passing breeze.

In spite of this, I can positively affirm that bees gather pollen from dog's mercury, and that in fair quantities; not a solitary bee, mind you, but enough of them to cause one to stop to ascertain the reason of all the hum and commotion amongst the herbage. I have not had the pollen of the hazel or that of the mercury under the microscope, but fancy that the latter will be as fine in particle as the former. In no case under my observation did a bee visit a female flower.—J. SWALES, Sleights, Yorks.

REMOVING BEES FROM HOUSE ROOF.

[5524.] As a reader of the B.B.J., I noticed an article on page 324 in B.BJ. of August 13 last year, written by Mr. W. Alfred Dawson, about a truant swarm that had taken up their abode in a hollow wall near the roof of his house. Mr. Dawson gave details of a plan by means of which he proposed to get the bees out. I have looked through every issue of your journal since, but have never seen how he went on with them. If it is not asking too much, I should very much like him to tell, through the B.B.J., how the plan succeeded, and how the bees have got on since. I send my name for reference, and sign—BEE-KEEPER, Middlewich.

BEE FORAGE.

[5525.] Referring to the letter of your correspondent, "T. J. P., Guildford" (page 172), I may say that when at the A. I Root Co.'s works, at Medina, U.S.A., I was much interested in two "weeds." One of these, viz., the "Weed" Foundation, filled me with admiration as I saw how beautifully the machine rolled off perfect sheets of foundation at an astonishing rate. The other weed was the one known as dandelion, and it filled me with disgust to see it blooming in such

masses. The time of the year was early June. The several houses of Mr. A. I. Root (head of the firm), his son, Ernest, also those of his sons-in-law, Messrs. Calvert (manager) and Boyden (secretary), are delightfully situate in the garden city of Rootville. The houses are not cramped together as at Buckingham-street, London, nor are there any fences to separate the grounds of one from the other. They are just pretty little houses standing in what was meant to be large grass plots, but the grass was non-existent. The dandelions, fertilised by the bees, had gained the upper hand, and there was one great dreary and ugly lawn covered with yellow dandelion. Coming nearer home, I have the same difficulty with my own place at Ormskirk; one continual war with the dandelion. I, therefore, recommend our friend, "T. J. P.," not to give way to temptation by encouraging this noisome "weed."—GEORGE ROSF, Liverpool, May 6.

BEE-KEEPING IN TASMANIA.

[5526.] I send a line to say I am going out to Tasmania in about two months and should be grateful if you, or any of your readers, could give me, through your valuable B.B.J., any particulars as to the chances of success with bee keeping in that grand island. Is there a good supply of bee-forage, and what kind of bees are most suitable? Also, can you give me address of bee-appliance dealers there and would it be possible to send out a queen by post safely for a journey of about six weeks? I shall be thankful for any information you can give on the above question. I am pleased to say all my stocks have turned out well this spring. I put supers on some several days ago, and the bees are working in them well. We should have a fine yield from fruit-blossom just now, and if the weather continues fine we anticipate good results. I send name, etc., for reference, and sign—TASMANIA, Oxford, May 7.

[We rather think the best reply we can give to your questions will be to forward a few copies of Australian Bee Papers from our file copy, and we will be very pleased to send some for perusal and return on receipt of 3d. for postage.—EDS.]

Queries and Replies.

[3400.] *Dealing With Foul Brood in May.*—In September last, when packing my bees for winter, I noticed in one of the hives a few cells of foul-brood. I therefore, examined my other two stocks carefully and found about half-a-dozen diseased cells in each. As it was then too late to attempt a cure I cut out the diseased cells and fed bees with medicated food. Upon examination in February last I found no trace of disease and commenced feeding with heavily medicated syrup. About the middle of April I joined two lots together so that I might have less trouble to deal with them in case the disease broke out again. However, on examining the hives yesterday (May 5) I discovered about six or eight diseased cells in my strongest colony. They are an extremely strong lot and headed by a young queen. My hives are thoroughly clean and painted inside and out and all combs are new, any old and black ones having been destroyed. It seems a pity to burn all combs and lose all chance of surplus this year. Will you advise me, through your journal, what to do? I send name, etc., and sign—W. D., South Wales, May 6.

REPLY.—Cut out the affected cells and continue the use of preventive measures as before, but destroy no brood that looks healthy and likely to hatch out. If the queen is young, prolific, and vigorous, as stated, it is not at all improbable that the colony will do well and yield surplus honey in the coming season. Numerous cases are recorded of stocks slightly affected with foul brood doing well and eventually getting rid of the disease, simply by the inherent vigour of the bees and queen.

[3401.] *Queens Laying Irregularly.*—I should be obliged for a little advice on the following: Last year one of my hives requeened itself, and the new queen was very fertile. This year, however, I find there is very little brood, and it is not in a patch, but there are intervals between; it is, however, all in the same comb. Added to this some of the cells are almost like queen cells. There is no fertile worker there, as I have seen the queen and also one of the young bees coming out of cell. A line of reply will oblige. Name enclosed for reference.—H. K., Yardley.

REPLY.—The indications given go to prove that the fertile queen of last year has met with some mishap, and that a queen was subsequently raised too late for mating. If this is so, the stock will be almost worthless now, as all the worker bees are old and not likely to do much good now that May is half over.

[3402.] *Non-Swarming Hives.*—I have recently purchased a hive with ventilating floor and stated to be non-swarming. Would you kindly inform me what steps are taken with the surplus population at swarming time? I have an empty new hive by me, which I propose fitting up with foundation, and what would be the best plan to follow in order to populate same? Would it be sufficient to put it beside the other hive after the same manner as your

correspondent "P. B." in last week's issue (page 171)?—F. H. FINEDON, Northants, May 7.

REPLY.—There is no analogy between your proposed plan and that described on page 171 of last week's B.B.J., which only dealt with providing hives for being taken possession of by swarms led into them by "bee-scouts." The hive with ventilating floor is in no sense a non-swarming hive beyond its affording plenty of free ventilation, which in itself is a preventive of swarming. Your swarms must, therefore, be dealt with in the ordinary way.

[3403.] *Destroying Diseased Stocks of Bees.*—I thank you for reporting to me, on page 170 of B.B.J. for April 28, about the foulbroody comb which I sent to you. As I think it will be wisest to destroy my bees and hive contents and then scorch the hives, would you kindly tell me what I ought to use in the smoker to destroy the bees? Would sulphur be strong enough, and would it work in the smoker? I cannot find directions for destruction in the "Guide Book."—E. R. C., Newton Abbot, April 29.

REPLY.—Sulphuring is the simplest way of destroying a diseased stock. Use an ounce of powdered sulphur set in a tin dish below the surface of the soil, and when the hive has had a puff of smoke, drop a hot coal in the sulphur, lift the hive from its floor, and set it above. All will be over in one minute.

[3404.] *Drone-Breeding Queens.*—Would you kindly let me know through B.J. a few particulars respecting enclosed piece of comb? 1. Is the queen (a young one of last year) a drone-breeder, or what? I have killed her, and united the stock with another lot. I also ask (2) Is there any sign of foul brood? for this lot had slight traces of it in the incipient stage three years ago, and I took necessary measures as you recommended at the time. Any other advice or comments will greatly oblige. I send name, and sign—O. C., Manchester, May 1.

REPLY.—There is no disease in comb. Queen was evidently a drone-breeder.

[3405.] *Keeping Bees near Roadside.*—I should be much obliged if you would tell me if the four specimens of bees sent are the same breed, as I bought them from different persons. The bees in No. 4 colony have died, and is the large bee sent the queen? (Yes.) I have a long slip of garden (11 yds. wide), which runs alongside the main road, and should like to know if I could keep Italians so near the road without interfering with people passing along the road? or would it be better to keep to the sorts I have, as I am told that Italians are more spiteful than the others? I shall be glad of reply in B.B.J. I enclose my name and sign myself—NOVICE, Sussex.

REPLY.—It is well known that the Italian bee, when pure, is very quiet and disinclined to sting, but when crossed with other kinds the hybrid so produced is occasionally rather vicious, though not often. This being so, we do not see any risk in keeping Italians under the circumstances, so long as there is a sufficiently high fence between the hives and roadside as would carry the bees well above the heads of passers-by when going and coming from the hives.

[3406.] *Hiving Swarms in Double Hives.*—Kindly answer the following in B.B.J.:—1. I have a double hive in which I intend to place two swarms of Italian bees. The hive in question has two entrances at front and one at each end, that is two entrances to each compartment of the hive. I am told by an expert that one entrance will have to be closed up entirely, only one being allowed to each swarm, or robbing will be the result. Is this so? 2. I have ordered two swarms from Messrs. Malan Brothers, Italy, whose advertisement I have seen in your useful paper. How had I better proceed when the bees are received? Must I hive them through the top, as advised in "Guide Book," or by throwing out in front for them to hive themselves? If the first means is taken, of course I can't feed them same night with syrup; both swarms going into same hive complicates proceedings. I presume they will arrive in straw skeps. I send my card for reference and sign—PROBATIONER, Worcester, May 4.

REPLY.—1. A single entrance only must be allowed for each compartment of the hive, as stated by the expert. 2. There are no instructions in the "British Bee-Keepers' Guide Book" such as you name. A whole chapter, occupying seven pages—with three explanatory illustrations—is devoted to "Hiving Bees," and if carefully followed no mistake can be made. But there is no word about hiving swarms at the top as you suppose. 2. As you are a beginner with bees, some care will be needed in getting two swarms—each intended to work separately from the other—into one hive. The two compartments must be carefully divided by close-fitting dummy-boards and separate quilts for each stock. The swarms, no doubt, will be sent in travelling boxes, each lot separate. We advise you hiving one lot only on day of arrival, so that the bees dealt with may get settled down before the second swarm is hived. This may be done the following evening, after bees have ceased flying for the day. The two entrances should then be carefully divided

by a good-sized board set on edge, so that the bees of the second swarm may not have access to the other compartment while the hiving is going on. The dividing board might remain for several days so that the respective entrances may be quite separate until the bees are comfortably settled each in its own compartment.

[3407.] *Bee-Work for Beginners—Supering and Preventing Swarming.*—I am beginning the season with four stocks of bees—two in frame-hives and two in skeps, one of which latter I have placed upon the top-bars of a frame-hive for bees to transfer themselves into, according to instructions in the "Guide Book." The other skep I am leaving where it is, and have a small super ready for putting on top when required. The last-named lot and that in one of the frame-hives seem very strong in bees, and are working well, and I shall therefore be glad to know:—1. When I ought to super them? The weather here is lovely just now, with an abundance of fruit-blossom ready for the bees, besides a good many field plants in bloom all around us. I have noticed how fond the bees are of working on a patch of turnip blossom near by. Everything, therefore, looks promising, but I am anxious to prevent swarming, not wishing to increase my stocks. How often ought I to examine the frames in order to see what is going on, and what breeding-space there still remains for the queen to have room for egg-laying? I read the B.B.J. carefully, and get much useful information, but I have no one at hand to consult with regard to bee-work, and I am constantly needing advice. I began bee-keeping only last July, and subsequently went through troublous times with them, but I have kept my bees strong and well until now, and naturally I want to make the most of them. I don't wish to attempt any but simple and necessary operations, until I have more experience. Thanking you for past kind advice, and hoping for further help, I sign myself—FRENHINES, South Wales, May 4.

REPLY.—1. The time for supering colonies in frame-hives is regulated by three things, viz.: abundance of bees, good bee-weather and good bee-forage. The first and second can be decided by the bee-keeper himself, and the third, which means honey coming in, can be ascertained by raising the quilts, and if the edges of combs have a white appearance—as if being lengthened out—it may be taken that they are ready for supering. 2. With regard to preventing swarms issuing from frame-hives, we cannot add much to what appears on pages 20 and 21 of "Guide Book," which you already possess, beyond saying that if your hives are not provided with a doorway capable of being enlarged to about twelve inches in width, the front of the hive should be wedged up to allow of ventilation and prevent the bees from hanging out. It is not so easy to stop swarming in skeps, but the "super" had better be given as soon as the skep is becoming crowded with bees, and if they take possession put a larger super below the first one a week or so later. You must not begin examining frames periodically "to see what is going on," with the view of preventing swarming, though, one examination may be advantageous to see that the frames of brood-nest are not occupied with surplus stores, or with too much pollen, to the exclusion of brood or cramping of the breeding-space.

[3408.] *Painting Hives Inside and Out.*—Is it a mistake to paint hives both inside and out? I have a "W. B. C." hive and painted both the outer case and the brood-box inside and out. When I examined the bees this spring I found them strong, but the floor-board was quite wet and everything on it saturated and mouldy. The roof is watertight, painted inside and out. There was an American cloth quilt next the frames, then six or seven quilts of felt and other material, and on top of that a cork-dust cushion. These coverings reached to the outer case all round. The American cloth quilt was wet in places on the under side, and the quilt next to it was wet at the edges where it reached the outer case. I had forgotten to take away the strip of wood over the entrance and between the two cases. Will you kindly point out what other errors I committed, so that I may keep them dry? I send my name for reference, and sign—NOVICE, King's Norton, May 6.

REPLY.—It is not advisable to paint the insides of new hives; but after being occupied by diseased bees we have found no appreciable disadvantage in painting the inside of brood-chambers when disinfecting. With regard to moisture being seen running from hive entrances, we regard that as a sure sign of prosperity, when observed on a warm spring morning, and is particularly noticeable in cases where the inside of brood-chamber is painted. The warmth of the hive interior with a full brood-nest naturally condenses on the hive sides, whether painted or not, and running down on to the floor board escapes by the hive entrance. On the other hand, there is no need whatever for so many coverings as our correspondent uses. A single covering of ticking or cheap carpet next the frames, with one felt quilt and a cushion of cork-dust over all is ample, or, if no "cushion" is used, two or three felt quilts will serve every purpose. Many bee-keepers use porous coverings only, and will not cover frame-tops with American cloth, as not

affording ventilation; while others follow the example of the bees when propolising and use non-porous coverings. However, the fact of the bees in question being found strong when examined recently shows that they have not taken any harm from the plan followed.

[3409.] *Drones Cast Out in May.*—I have a very strong stock of bees in a straw skep. They have been at work all through the present spring. On Friday last (6th inst.) I noticed about a dozen newly-hatched drones on the ground beneath the hive. I picked one up, and the warmth from my hand speedily revived it so that it could walk about. For the last two or three days I have seen several more drones thrown out. Will you please let me know what is wrong? I enclose a few of the drones for inspection. Thanking you for all the information you have given me in former cases.—W. A., Oundle, May 9.

Reply.—The young drones sent are fully developed and quite normal in all respects. No doubt the adverse weather of the past few days, and possibly a scarcity of stores is the cause of their being cast out.

[3410.] *Disinfecting Combs and Appliances with Formalin.*—I am anxious to fumigate the whole of my appliances, combs, etc., in a room 600 cubic feet. What quantity of formalin would you advise using? I intend passing frames through a hole in door. The formalin I have is a liquid and labelled "Sherings No. 4." I have had a slight attack of F.B. among my bees and want to try formalin as a fumigator.—H. H., Derby, May 8.

Reply.—This can only be decided by experiment. We should begin with two or three ounces, and increase the dose if found desirable.

[3411.] *Dealing With Badly-Built Combs.*—I purchase a hive of bees last winter, and upon looking inside recently it appeared not to have been cleaned or attended to for a very long time. I decided, therefore, to transfer the bees to a clean hive. I have just done so, and found the inside in rather a muddle. There were eight frames, no metal ends, but with small distance piece jammed in and nailed down, so that I had to force each frame out with a screw-driver. The frames were all full of combs, which latter had been built round the ends of the frames and stuck on to the hive sides with brace-comb. I had great difficulty in getting the frames free, and was obliged to break off some projecting pieces of comb before I could get them out for removal into the new hive. All frames of comb, except one, contained more or less brood, but I could only replace seven of the eight frames, so kept the one out from which I cut sample of comb sent. They were all covered with bees, but I could not find the queen; one of the central frames had a double lot of comb with a space between full of bees, she may have been there. Will you please tell me:—1. If I have done the right thing? 2. Is not the accompanying comb too dark, though the brood in it seems all right? 3. Should I leave the frames as they are, with the very irregular comb? 4. What is the enclosed grub? I found several like it. Nearly all the frames have patches of comb similar to the piece I am sending. Your kind reply in next B.B.J. will oblige. I send card, and sign—Novice, Wilts.

Reply.—1. Yes. 2. Comb is quite normal, as coming from an old stock of bees. 3. You must get rid of any faulty combs in due course, but do not destroy brood in them while so occupied. 4. The larvæ of wax-moth and any others seen should be promptly destroyed. 5. There is nothing wrong with brood in comb sent; the pity is that you have lost several scores of bees in sample sent, and as many more as still remain in the frame of comb kept out of new hive. Why does the latter only take seven frames?

[3412.] *Insurance for Bee-keepers.*—I shall be glad to know, through your "Queries and Replies" column as to my liability in case of a swarm of bees alighting upon trap horses, and the like, and if there is any insurance company that covers this risk (if any)? I enclose card for reference. —A. L., Clifton, Yorks, May 6.

Reply.—You are evidently a new reader of our journal, wherein has appeared full details of the scheme of insurance for bee-keepers formulated by the British Bee-keepers' Association. The scheme has now been in full operation for about three years past. To participate in its advantages members of County B.K. Associations must apply to their hon. secretary, and non-members can obtain particulars from Mr. E. H. Young, secretary of the B.B.K.A., 12, Hanover-square, London.

[3413.] *Getting Combs Worked-Out Ready for Swarms.*—I intend placing frames filled with foundation in hive to be drawn out I have two other hives, with strong stocks, from which I want two swarms; would it be advisable to hive these swarms on the drawn-out combs, instead of the foundation? Would it be an advantage? Awaiting your reply in B.B.J.—A. B., Downton, May 9.

Reply.—Yes, the plan proposed will be the right one.

[3414.] *Preparing Honey and Wax for Showing.*—Will you kindly reply to queries as below in B.B.J.:—1. Should drone or

worker foundation be used in shallow-frames for exhibition? 2. Would it be any disqualification if sulphuric acid were used in purifying wax for exhibition? I enclose name, etc., and subscribe myself—SURREY BEE-KEEPER, May 9.

REPLY.—1. This is simply a matter of choice for the bee-keeper, as the size of the cells does not affect the question of suitability for extracting purposes. 2. The use of acid cannot well disqualify an exhibit of wax, seeing that it would puzzle a judge to tell whether or not the acid had been used.

Echoes from the Hives.

Lowestoft, May 6.—Bees look very promising here. We have had drones on the wing for some time, and the prospects of a good season are bright if we get no frost. What a difference the weather makes! Our return for bee-goods for April, 1904, is just about five times that of April last year.—L. WREN.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 7 to 10, at Guildford. — Royal Counties Agricultural Society's Show. Bees, Appliances, and Honey Department, under the management of the Surrey Bee-keepers' Association. Twenty-one classes. Schedules from F. B. White, Hon. Secretary, Marden House, Redhill, Surrey. **Entries close May 14.**

June 21 to 25, at Park Royal, London.—Royal Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A. Increased prizes for B.K.A. Associations as arranged in divisions or groups of counties. Schedules from Edwin H. Young, Secretary, 12, Hanover-square, W. **Entries close May 16.**

July 14 and 15, at Grimsby.—Show of Honey Hives, and Bee Appliances in connection with the Lincolnshire Agricultural Society. Bee Department under the management of the Lincs. B.K.A. Fourteen classes Liberal money prizes and silver medals. Schedules from R. Godson, Hon. Sec. Lincs. B.K.A., Tothill, Alford, Lincs. **Entries close June 14.**

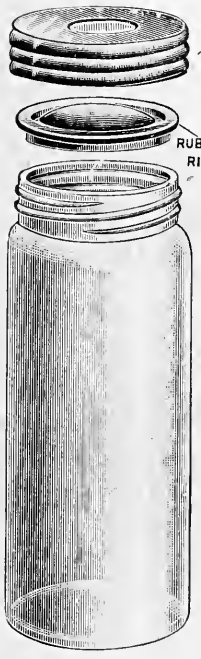
August 4, at Kingsthorpe, Northants.—Honey Show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar of honey. (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Hon. Sec., Kingsthorpe, Northampton. **Entries close August 1.**

August 24 and 25, at Leamington.—Annual Show of the Warwickshire B.K.A. in connection with that of the Warwickshire Agricultural Society. Schedules from James Noble Bower, Hon. Sec., Warwickshire B.K.A., Knowle.

August 30, at Cartmel, Lancashire.—Honey show in connection with the 32nd Annual Show of the Cartmel Agricultural Society. Three open classes for Comb and Extracted Honey (prizes, 15s., 10s., 5s., and 2s. 6d.), and Beeswax (prizes, 10s. and 5s.), along with silver and bronze medals of the Lancs. B.K.A. Schedules from W. Cragg, Secretary, Cartmel, viâ Carnforth. **Entries close August 18.**

NOVELTIES FOR 1904.

A NEW HONEY JAR.



Messrs. Abbott Brothers, of Southall, have sent us a sample of the new patent "F. F. G." Vacuum Pots—or, as better understood for bee-keepers' use, Vacuum Glass Honey Jars. The accompanying illustration shows the article, which, according to the manufacturers possesses the following advantages:—1. They are machine made, of clear white glass, and free from bubbles and splinters. 2. Perfect adjustment in cap, and no cork wad necessary. 3. The only jars that will not leak in any position. 4. If not in use for honey, they form perfect fruit-preserving jars, now so much in demand. 5. They hold 12 oz. of water, and as 11½ oz. of water is equal to 1 lb. of honey, the bottle holds 1 lb. of honey to the bottom of cap; this leaves a small space at top for adjustment of weight, allows bubbles, etc., to come to the surface, and leaves the cap clean. Glass jars that have to be filled quite full to hold the 1 lb. are most undesirable to both sellers and consumers of honey, in spite of all that is said to the contrary. 6. The new shape of caps and rings leaves no sharp edges to cut the fingers or catch in cloth when cleaning.

[We can only add—after inspecting a sample jar, that it appears to fill all the conditions claimed for it.—EDS.]

PRESS CUTTING.

A correspondent sends the following interesting "cutting" from a Manchester contemporary:—

ENEMIES OF THE BEE.

"I know that some of my correspondents take an interest in bees, because I have received letters from them concerning these

interesting little insects, and the enemies which prey upon them. Several kinds of birds will take and eat bees, especially sparrows, starlings, flycatchers, great titmice, swallows, and swifts, which I have myself at various times observed playing about the beehives, and catching the inhabitants thereof. Toads will also capture bees, and it has always been a wonder to me how the soft-throated creatures manage to do it without getting stung. Some of the birds certainly nip the body in half so quickly that the insect has not time to use its sting, and in this case I believe that only the upper half of the body is devoured, but others certainly swallow them whole, as do toads, and yet they suffer no evil effect. Mice I have known to eat bees, and they regularly attack and scratch out the nests of many of the ground-building bumble bees; but it was quite news to me until the other day that bats were amongst the bee's enemies."

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

C. E. S. Watson (Bridport).—Schedules for "Royal" Show.—2. We have no schedules at this office. As stated on front page of our last two issues, they may be had from the secretary of the B.B.K.A., 12, Hanover-square, London. 2. The firm named have not advertised in our pages for several years past. The only address we know of is Redhill, not "Reigate" as stated.

James Skinner (Bristol).—Bees and Hazel Catkins.—Kindly refer to the editorial remarks on page 184, which will, we think, clear up misunderstandings on both sides.

G. E. Roger (Cambridge).—We are sorry to learn of the sad mischance whereby an esteemed member of your association met with his death while engaged in bee-work. No doubt it was a case of accidental death, as recorded in the verdict.

A. J. Dover (Sevenoaks).—We do not publish advance notices of lectures on bees except as advertisements. But, apart from this, the "copy" sent is hardly suitable for print.

Honeycomb. (Stratford-on-Avon.—Candy Making.—Your sample has not been sufficiently boiled, or stirred long enough while cooling after boiling. Consequently it is too soft, and would run down among the bees. It is also very coarse in grain, not smooth and "buttery" as good candy should be.

W. Fay (Havant).—Your letter must have miscarried in post, as we find no trace of it or box containing matter for examination. We cannot, therefore, reply without a further sample from floorboard of hive.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul brood."

We urgently request that all letters sent with samples of suspected comb be put outside the box or tin containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.

In urgent cases (and where possible) we undertake to "wire" replies as to F.B. if six stamps are sent to cover cost of telegram. All letters should be addressed "Editors," not "Manager."

J. W. C. (Banbury).—There are slight signs of incipient foul brood in comb, but your small sample being wrapped in cotton wool was rendered unfit for forming an accurate opinion, owing to the wool, and by being crushed out of shape in packing.

F. W. G. (Dulwich).—Comb sent has never been bred in at all; it contains nothing worse than mouldy pollen.

Special Prepaid Advertisements,

Twelve words and under, Sixpence: for every additional Three words or under, One Penny.

QUEENS, 5s.; NUCLEI, 7s. 6d. "Bees," Hall Post Office, Little Aston-road, Birmingham. A 68

28TH YEAR.—SWARMS, 10s. 6d., 12s. 6d., 15s. Cases free. Alsford, Expert, Hayden, Sherborne.

GUARANTEED HEALTHY STOCKS, BEES, crowded on eight frames, standard size, on rail free, £1. Box 1s. returnable. Rowland, Cliff, Holbrook, Derby.

THREE GOOD COTTAGE BAR-FRAME HIVES, had bees in one season, 10s. each. Foster, Helm Park, Tow Law, Durham. A 67

STRONG, Healthy, Natural SWARMS; guaranteed safe arrival; 12s. 6d. Cadman, Codsall Wood, Wolverhampton A 59

A FEW Dozen beautifully drawn out Shallow FRAMES 1s. each to clear. E. H. Taylor, Welwyn.

W.B.C. ENDS, best make and finish, not less than 10 gross, at 1s. 9d. carriage paid. Abbott Bros., Southall

100 GROSS SOLID BRASS CONES. Not less than three gross lots, at 7s. 6d. carriage paid. Abbott Bros, Southall.

STRAW SKEPS.—4 doz. Rye Straw and Cane-bound. Usual price 21s. Price 17s. doz. Wood centres, 18s. doz. Abbott Brothers, Southall

3-PLY WOOD PANELS (24 by 24). Best 100. each; second quality, 7d. each. Useful for bee-keepers. Cannot warp or alter in size. Abbott Brothers, Southall.

FOR SALE, 8 FRAMES of BEES, BROOD and QUEEN; combs worked from full sheets, wired in, and guaranteed healthy; 16s. Hayes, Winterton, Co. Durham. A 64

Editorial, Notices, &c.

SURREY BEE-KEEPERS' ASSOCIATION

ANNUAL MEETING.

The eighth annual meeting of the Surrey Bee-keepers' Association was held at the County Hall, Kingston, on April 30, those present including Messrs. G. M. Walker, J.P., C.C. (who presided), Archibald Seth-Smith, W. Sole, W. A. Dawson, W. F. Reid, F. S. Fletcher, J. G. Mill, H. Sayers, T. Gibbons, A. H. Miller, F. Ilott, F. H. White, J. Greenhill, F. J. Weise, G. Anderson, F. B. White (hon. sec.). Apologies for non-attendance were read from Gen. Battersby, Messrs. W. Welch, C.C., E. C. P. Hech, C.C., E. Jay, E. Walker, F. J. Burnaw, J. H. Marsh, J. Kachler, A. Watkin, and Osman.

According to the eighth annual report, it appeared that during the year 113 new members had been enrolled, the total membership now numbering 616. The Executive Council had carried out the work specified in the agreement with the County Council with regard to the grant of £150 viz, the bee-van tour, lectures, experts' visits to members, and the publication of the monthly journal. This branch of the work had been so satisfactorily performed that the C.C. grant was to be renewed for the present year. The returns of the visiting branch of the work showed that 534 bee-keepers had been visited by the experts, and 2,593 frame-hives and 373 skeps, or a total of 2,966 stocks, were examined. Of these, 127 were found dead from want of careful attention to feeding, etc., in the autumn, while 112 stocks were affected with foul brood, thirty-four of these being destroyed, and the rest—being only slight cases—were placed under treatment.

The accounts showed an income of £141 from general subscriptions, in addition to the grant from the County Council. Special subscriptions to the show funds had amounted to £38, and there was a balance to the good on the show, amounting to £9 13s. 2d. On the general account there was shown an excess expenditure of £10 9s. 7d., which was made up from the reserve fund, leaving the latter at £46 4s. 6d.

The Chairman moved the adoption of the report and accounts, and said he was glad to congratulate the committee upon them, notwithstanding that the season of 1903 had been unfavourable for bee-keeping. He was pleased that they had an increase in the membership from 150 in 1895 to 616 at the present time. He thought this great success was due very largely to their admirable and energetic secretary, who was backed up by a thoroughly energetic committee who knew their business. He thought perhaps the £150 voted by the County Council to this association went through more easily than any other sum that was voted, because the Council felt that the money was well spent and that full value was given. He noticed that the honey department at the Royal Counties' Show at Guildford in June was to be under the management of this association, which he thought was a great compliment to them. The proposition was seconded and carried unanimously.

The following were appointed the executive council for the year:—Messrs. Archibald Seth-Smith, F. J. Bernaw, R. C. Blundell, W. A. Dawson, F. S. Fletcher, G. C. Halahan, J. Kachler, J. King, J. W. Lewis, J. H. Marsh, A. H. Miller, W. F. Reid, W. Sole, E. A. Stopford, E. Walker, A. Watkin, T. H. E. Watts-Silvester, and F. B. White.

This concluded the business, and a vote of thanks was accorded Mr. Walker for presiding.

STAFFORDSHIRE B.K.A.

PRESENTATION TO MR. A. H. HEATH.

Mr. A. H. Heath, M.P., president of the Staffordshire Bee-keepers' Association, was presented with an illuminated address in album form by the members of the association, on the occasion of the twenty-first anniversary of its formation. Mr. Heath was the founder of the association, and for nine years acted as honorary secretary, and latterly as president. The presentation took place on April 30 at the County Education Buildings, the proceedings being presided over by the Rev. A. R. Alsop, vicar of Bednall, one of the original members of the association. In addressing the meeting the Rev. G. C. Bruton, the hon. sec., referred to the first meeting of the association held on April 28, 1883, the meeting being the outcome of a letter advocating bee-culture which Mr. Heath had sent to a Staffordshire newspaper. In the following year the expert reported that he had inspected 254 frame-hives and 143 skeps; and, as showing the progress made since, at the last annual meeting 1,022 hives, of which no fewer than 775 were modern frame-hives, were inspected. Congratulatory addresses were also delivered by Colonel Mort, Mr. R. Cock, Mr. E. W. Turner, Mr. J. R. Critchlow, and Mr. J. Kendrick. The address, which was bound in morocco, was then presented to Mr. Heath. In accepting the address, Mr. Heath spoke of the great advance that had taken place in scientific bee-keeping during the last twenty-one years. The motto of the association was that bees should not be killed to obtain the honey, and if that was so in 1883 they could claim

that they had worked up to their professions. Any one could now be taught to manage bees so as to make their culture not only a pleasant recreation, but a useful and a profitable industry. He should value the present as coming from some of his oldest and best friends and well-wishers. —(Communicated.)

BERKSHIRE B.K.A.

ANNUAL MEETING.

The twenty-fourth annual meeting was held at the Abbey Hall, Reading. Amongst those present were: Mr. F. B. Parfitt, J.P. (in the chair), Rev. D. O. Harrington, Mr. and Mrs. T. A. Flood, Miss Livings, Messrs. F. Moring, A. Gibbs, Baker, P. Wilkins, W. S. Darby, W. Woodley-Johnson, J. Beard, J. Spanswick, F. Chapman, H. W. Seymour, Frost, and D. W. Bishop-Ackerman, hon sec. Apologies were received from W. A. Mount, Esq., M.P., Messrs. E. Blatch, S. Knight, and H. Edwards.

The Secretary read the twenty-fourth annual report of the year's labours of the Association, which includes details of educational work for the Berks County Council, who made the usual grant of £50 for educational work connected with bee-keeping. The various items comprised a bee-van tour of twelve days, with lectures and demonstrations, expert's visits to members, and the bee-tent at various flower shows. The finances of the Association show a satisfactory credit balance of £50 in the year's accounts, and the membership is well maintained.

The election of officers was then proceeded with. Mr. F. B. Parfitt, J.P., being unanimously elected chairman, and Mr. W. C. Stoneham vice-chairman. The Vice-Presidents were all re-elected, as were also the committee, with addition thereto of Messrs. A. Gibbs and F. Moring, Reading, and Mr. Brown, Windsor. Mr. W. E. Collier was voted to the office of auditor, and Mr. Bishop-Ackerman re-elected hon. secretary.

A general discussion followed. After light refreshments the meeting concluded with a conversazione.—(Communicated.)

REVIEWS.

Conduite du Rucher. By Ed. Bertrand. Published by R. Burkhard, Geneva. Price 2 francs 50 centimes.—This is the ninth edition of the admirable guide-book by this well-known author. It has been thoroughly revised and brought up to date, and its popularity is shown by the fact that already twenty-five thousand copies have been disposed of, and this edition consists of five thousand. The *Conduite* has not only a circulation in French-speaking countries, but it has also been translated into Italian, Russian, German, Dutch, and Bulgarian. Continental bee-keepers are greatly indebted to M. Bertrand for taking the trouble to revise this work at a time when he is retiring from active work and earning his well-deserved rest.

Small Culture. Series 2. Edited by W. J. Malden. Published by E. Marlborough, London. Price 2s. — In bringing out these books the publishers are supplying a demand for information on "Small Culture," as the increase in allotments has greatly encouraged individual effort on a small scale in the various branches of culture. Many have small gardens and wish to add a few bee-hives or some fruit trees to their other hobbies, and it is mainly for such that this book is written. In the one before us different authors write on the several subjects of orchards, vegetables, allotments, glass-culture, and bee-keeping. The two chapters on the last-named part of the work, occupying twelve pages are by Mr. C. N. White, and the subject is as well treated as it is possible to do in so limited a space. There is just enough to stimulate the appetite for more information on the subject. The book contains eighty pages (twelve pages being devoted to each subject), and is illustrated and bound in cloth.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[5527.] *Honey Jars.*—A point gained at last! I have before me as I write a new honey jar made by the firm of "Triangle brand" fame whose excellent jars in the past had one fault only, and that was capacity. They are making a new size of jar (marked with the figure 9 within the triangle) that holds 1 lb. net of honey. Our friends, therefore, who sell their honey in jars should order "No. 9." Several of our appliance dealers stock the "Triangle brand" jars; the tall tie-over 1 lb. jar is a good one, as is the new screw-cap jar.

(No. 6); but I find No. 6 holds 17 oz. or more of honey.*

The discussion on foul brood has again cropped up. No doubt the moist, warm air of the Lake District would tend to the more rapid development of the pest than in high and dry districts. Past volumes of the B.B.J. will tell how far bee-keepers have gone in the effort to obtain compulsory powers for dealing with the matter. We have also the example of our Canadian brethren in applying the remedy, and except for the compulsory power of the Government Inspector we can follow in their wake; and if our Associations would only set about the cure on what is called the "McEvoy method" I have no doubt that most bee-keepers would gladly agree to have their apiaries when affected attended to and cured, and the available funds of Bee-keepers' Associations could not in my opinion be spent on a more desirable object than dealing with the pest of foul brood.

Wax Moth. — This pest requires constant vigilance to keep it in check. When removing quilts to put on the supers cases do not let a single larva escape. Possibly a few may be found amongst the wraps; with care every one may be killed. Again, never allow any old combs to remain in untenanted hives or in the store-room. These are harbours of refuge for the moths, and will soon be full of cocoons if not attended to.

Smoker Fuel. — If anything that is intended for the smoker is soaked in water in which a little saltpetre is dissolved, and then dried, there will be no trouble in keeping the smoker alight.

Bee-Forage. — Though others may despise the dandelion as of little value as a honey-plant, I know for certain that every year, given suitable climatic conditions, my bees roar for very plenitude when the dandelion is practically the only plant in bloom, and I have many times tasted the newly-gathered nectar, which has been distinct in flavour and aroma, of the dandelion. I have also noticed the bees very busy on the beech trees when in bloom. The sycamore and horse-chestnut are good forage for the bees. The sycamore, I consider, from external observations, far before the chestnut. The maple trees, also, when in full bloom, are as though a swarm was around them.

Nature's way in feeding is most conducive to the growth of the brood-nest; the old dame may be—nay, is—fickle, but when we get warm days, on which our bees gather a good supply of food, and then two or three dull and cold days, then another warm day or two, these are the times of rapid growth of the brood-nest. The warming-up by the extra gathering of food, coupled with a rise in temperature, gives the preparatory *rim* that sets the whole united energy of the colony at work putting their house in order, and consequently moves them a stage forward. But the ingenuity of man has been directed to the supply of one continual dribble of food in such small quantity that unless Nature steps in and warms up the energy of the colony it would never grow to that effective "boiling over with bees" condition so requisite to secure that record quantity that maketh glad the heart of the bee-keeper when he totals up the results of the season.

Fumigating with Formalin. — Pray do not let us deceive ourselves that the fumes of formalin will penetrate honey and render innocuous any germs of foul-brood that may be in the honey. — W. Woodley, Beedon, Newbury.

Note.—Please allow me sincerely to thank the many bee-keeping friends for their expressions of sympathy in the large number of letters received from all parts of the kingdom.—W. W.

[*We must point out that Messrs. Abbott Bros., in describing the new "Vacuum Honey-Jar (No. 6)" shown on page 189 last week, expressly state that the jar in question holds 1 lb of honey when filled to bottom of cap, and this is justly included among the advantages of the new jar as allowing the bubbles to rise to surface while keeping the new dome-shaped cap clean.—Eds.]

BEE-NOTES FROM SOUTH-WEST LANCASHIRE.

[5528.] We are now in the midst of the fruit-blossoms—apples, pears, currants (black, white, and red). The damson and gooseberry blossoms are just over, and there promises to be a large amount of fruit this year—*if* no frosts in May cut the young fruit off, as has been the case for some years now.

White rock is passing away, but myriads of wall-flowers—blood-red, yellow, and streaked—still fill the air with their delicious scent, and supply the honey-bee with loads of light yellow pollen. Dandelions dot the pastures, highways, and hedgerows in countless numbers, and these give a good supply of dark yellow or yellowish-red pollen. The hawthorn, too, will soon be in bloom, and this will delight the bees.

Some days during the past month have been gloriously fine, when to the bee-keeper the music of his hives has sounded to him like a well-tuned Wagner orchestra does to a high-souled musical critic. Other days have been cold, windy, and cloudy, when only an occasional bee ventures forth, for the little labourers love not the biting sharpness of the east wind. Have you ever noticed in fine weather—on what we call a good bee-day—that bees are always teaching man useful lessons? They rise early, but go to bed (if I may so say) early. Among my hives I very rarely, at this time of the year, see many bees enter the hive

after six o'clock at night, whereas the humble-bee works both early and late. I saw the first queen wasp last night, and my wife promptly killed it, for Lancashire folks have a saying to the effect that "if you kill the first queen wasp you see, you will overcome your enemy."

Most Lancashire farmers follow a three years' rotation of crops. First potatoes (when the ground is heavily manured), then a straw-crop (wheat, barley, oats, etc.), then clover-hay, so that one-third of the land is available for bee-forage. To this we must add the various fruit-trees, forest-trees, and wayside hedgerows, and parks, which supply a certain amount of honey.

There is not very much permanent pasture in Lancashire, nor are there many miles of waste land in the south and south-western parts. The country is also much exposed to the western blasts of winds. During the fierce gale of wind on February 29, 1903, hundreds of hives were blown down, and incalculable damage was done to bee-keepers.

May all Lancashire bee-keepers—who are a genial and kindly race of men—have a good time this year, to make up for the two last bad seasons.—H. B. S., Ormskirk, May 12.

BEE-FORAGE.

[5529.] Since I wrote last week I have ascertained by personal observation that bees do gather honey from strawberries. The past week has been a splendid time for bees. There is an immense wealth of fruit-blossom, the chestnut trees, with their loads of bloom, look like immense candelabra, but I observe only a few bees on them; probably they find an abundance of food better to their liking in the sycamores, which I am informed are full of bees, though I have not seen any sycamores personally. I have been observing the lilacs, but can see no bees on them. The hawthorn in some parts here is out, and within a week should afford a great store of excellent honey, as well as please our sight. When up in the north I had some good sections from the hawthorn at a time when nothing else was in bloom. All the indications at present point to a good honey year. Stocks are strong, and breeding very forward.

With reference to the diversity of opinion expressed as to the values of certain bloom as sources of pollen or honey, a good deal of the difference is due to local circumstances. For instance, at present down here one might easily conclude that the chestnut was not visited by bees, whereas it is simply the case that there is plenty of other food about which the bees like better. If the chestnut were practically the only source of food-supply, as in some districts, it would of course be better patronised by the bees. If we see that the bees do not visit certain flowers reputed to be honey-producers, we may be quite sure that there is an abundance of more desirable food in the neighbourhood. I have some good wallflowers in my garden, but the bees take no notice of them, but I observe them working on the strawberries. We, therefore, cannot very well be dogmatic on these matters. From this time forward, if the weather keeps fair, our bees should revel in abundance of food. It is quite evident that, seeing swarms which come off early in May do so well, that there must be plenty of food about from May onward. Sunday, May 15, was extremely warm, and just the day for swarms where stocks were strong and had not been supered. My two strongest lots were supered on the 9th inst., and went up at once, though not in such force as they would be in later on, but they had two empty frames of foundation given to replace frames removed for other purposes, which would keep many of the bees working below. All stocks, unless very weak indeed, may now safely be given the full complement of frames up to ten, at least down south. This will help to prevent swarms, and give room for breeding, so that a good stock of bees may be out by the beginning of the larger honey-flow later on.—W. J. Farmer, Truro, May 15.

(*Correspondence continued on page* 196.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

A bee-keeper occupied, as Mr Barber is, from early morning till evening away from his home at heavy manual work, yet withal able to show an attractive little apiary like that seen on next page, with hives made in his spare hours, is a reader whom we are glad to know, as possessing the true material of a good bee-man, and therefore needing no introduction to our readers. Of himself he says:—

"As a subscriber to your valuable journal for a dozen years past, I send a few notes as requested to accompany the picture of my bee-garden in the 'Homes of the Honey-Bee.' I have been working among bee-hives nearly all my life, for my father kept bees in skeps, and when a boy I used to attend the hiving of swarms, and putting on the little straw-caps in which the bees stored surplus honey. I have kept them myself for eleven years past on modern methods in frame-hives, starting with one hive, and my father giving me his first swarm of that year to stock it with. I did not get any honey that season, for the stock sent out a maiden

swarm, and with this I had to be content without profit from the bees. During the following winter I made two more hives, and in the second year I increased my apiary to three colonies, and I have been on the increase ever since; but I advance slowly, for my stocks only number thirteen now. As a matter of fact, I prevent them from swarming all I can by shading and giving plenty of advance surplus-room in hot weather. The poles seen in the photo are used for the purpose of shading the hives from the hot sun. I have a piece of light material which is nailed along on the poles, and it keeps the sun off the front of the hives (which face south) from about noon till three p.m. My occupation is that of a platelayer on the railway, and this takes me away from home all day. I have, therefore, to do all my bee-work in the evenings. My time being limited, I am unable to do much showing, but I have made a start in this direction, and my first appearance on the show-bench was at Cambridge in 1899 at the Agricultural Show. On that occasion I secured two prizes, and the following year, when it was held at Ely, I took two firsts out of three entries, one prize being a silver medal, which I received with not a little pride and satisfaction as the combined efforts of my bees and myself. For some time afterwards, not being able to hear anything like activity about the Cambridgeshire Association, I gave it up as lost. I have exhibited at the Confectioners' Exhibition for the past four years, and I have taken several prizes at this London Show. It happens that I always have my annual holiday at the date when the Show is held, and I am then able to attend, and thus get a chance to see the display of honey, which I think is a grand one. In 1902 I got first prize for sections, in addition to the certificate of the British Bee-Keepers' Association. Our honey is chiefly from sainfoin, which makes up sections of first quality, as no doubt you know very well. My bees are the common brown variety, and I think they are hard to beat as good section-builders.

MR. A. BARBER'S APIARY, COMBERTON, CAMBRIDGESHIRE.

"I married and came down here to live eight years ago, bringing three hives with me. As regards my bee-produce, I sell all my honey wholesale to a London grocer, both sections and extracted, and, as the latter is delivered in bulk, I do not have any jarring-off to do.

"I am glad to say we have started our Association as the Cambs. and Isle of Ely B.K.A., and have already held two meetings, which I attended. I wish it every success and a good future among county associations. In conclusion, I may say the figures in photo are those of my little boy— a bee-man of four years—and myself. Wishing all brother bee-keepers a prosperous year, 1904."

CORRESPONDENCE.

(*Continued from page* 194.)

BEE-KEEPING IN TASMANIA.

[5530.] Referring to the letter (5526, page 185 last week) on "Bee-keeping in Tasmania," I received the following information in a letter from there dated February 29 ult. :—

"No good can be done in Tasmania at bee-farming; the Tasmanian climate and trees are both only of a second-rate description for this industry."

As this information comes from Mr. Thos. Bolton, President of the Victorian Apiarists' Association, it might prove valuable to your correspondent.

With regard to sending queen bees out there by post, I should strongly advise your correspondent not to risk a valuable queen in this way, but to despatch her in a nucleus.—B. NOEL-REED, Notting Hill, W., May 13.

AN APPRECIATION.

[5531.] I am very pleased to see that Mr. Cowan has brought out a new edition of his "Note Book," which should be an immense help to the methodical bee-keeper. I have, for some years, tried to concoct such a book for my own use, but have failed; it was quite beyond me. I am, therefore, all the more glad to possess a copy of "The Bee-keepers' Note Book," and wish for it a grand success.—MARY SPENCER, St. Oswald's Apiary, Holywell Manor, Hunts.

Queries and Replies.

[3415.] *Uniting Weak Stocks in May.*—Will you kindly enlighten me upon one or two points through your indispensable journal? I examined two stocks of bees yesterday which I had wintered, and in one of them could find no brood at all, nor could I find a queen. In the other there was not much brood, and both hives were rather weak (about sufficient bees in each to well cover four frames). I united the two colonies. 1. Did I do right? In the hive judged to be queenless I saw a number of drones. 2. Is it possible that these can have been tolerated through the winter; and if so, is it not very unusual? 3. Supposing there is, say, half-a-dozen pounds of honey in the frames, is it necessary or advisable to continue feeding? I also purchased a small stock in a skep, and placed it upon the top-bar of another empty frame-hive. 4. Are the bees almost certain to leave the skep and take possession of the frames in lower hive, which contain six frames fitted with full sheets of wired foundation? 5. If the bees are most likely to transfer their brood nest below, about how long a time should elapse before they do so? I trust you will kindly reply to these questions (awkwardly put by a novice) in the next issue of B.B.J., to which I look forward each week with delight, and am always abundantly satisfied with its contents.—THOS. SMITH, Carlisle, May 12.

REPLY. 1. Yes, quite right. 2. It is more likely that there was a fertile worker in the queenless stock. 3. If the present fine weather continues, and your district has a fair amount of bee-forage in bloom, no feeding will be needed; otherwise, a little warm syrup would help to stimulate breeding. 4. All depends upon the condition of the bees in skep with regard to the number of bees it contains. The latter will only start working in lower hive when the queen requires more breeding room, or when the skep becomes crowded with bees, and this can only be judged on the spot. You will be able to form some idea when breeding has started below by the increased activity of the bees and the abundance of pollen carried in.

[3416.] *Dealing With Store-Combs Used on Suspected Stocks.*—May I trouble you for advice on the following questions:—On looking through my hives last week I found my observatory hive was slightly affected with foul-brood in about six cells on each side of four frames of the nine it contained. It was not a bad case, and seemed to be a recent outbreak. In dealing with it I followed the directions in "Guide Book," burning the combs and quilts and scorching the hive inside with a painter's lamp. I made an artificial swarm of the bees, and they have now three frames of comb drawn-out and look like making a strong stock. The question I would like to ask is this:—The infected hive is not located at my apiary, but in a spare room at my house, and the bees have access to the hive by an opening cut in the window-frame. I examined the stock in June last and found it perfectly healthy. I then put on a rack containing five shallow-frames, two of which were for extracting and the other three contained nine sections in all. The extracting combs were duly filled with honey, but owing to bad weather the sections were not touched. As this hive was near to where I extract my honey I let its bees do all the clearing up of wet combs from my other stocks after extracting; I afterwards stacked the combs in racks one above the other in a spare room close to one in which bees were. My questions, therefore, are:—1. Do you think it would be safe to use the shallow-frames and partly drawn-out sections after being stacked to-

gether with those that have been on the infected hive? Or, 2. Would it be safe to use new frames and foundation and sections and scorch the inside of racks with a painter's lamp? I should be glad if you could telegraph your advice on enclosed form as soon as possible, owing to the short time there is to get frames and sections ready, and the quantity I shall have to do is for fourteen hives, and I have only spare time to do it after eight o'clock at night. In "wiring" reply you need only say follow first or second plan, whichever you may advise, and I will understand what to do. Thanking you in advance.—J. LEENEY, Stratford-on-Avon, May 9.

REPLY.—Of the two proposed plans, the second one is safest and best, seeing that the "recent outbreak" of disease in the hive, the bees of which did the clearing up of the combs in question, renders the use of said combs more than risky. In these matters it is always best to err on the safe side if at all.

[3417.] *Working for Increase.*—I have seven stocks of bees, all fairly strong—*i.e.*, the hives (holding ten frames each) are nearly full. What is the quickest and best way of increasing them, and what increase may I reasonably expect if I am willing to sacrifice all surplus-honey to that end? Name and address enclosed for reference.—BEE-KEEPER, Cheltenham, May 9.

REPLY.—Make artificial swarms, when weather is settled and warm, according to full instructions in the "Guide Book."

[3418.] *Loss of Queen in May.*—On examining one of my stocks to-day I failed to trace the queen on any of the frames; the stock is apparently a strong one, as ten frames are fairly covered with bees, but not a trace of brood or eggs could I see on any frames, only cells containing pollen. I therefore ask:—Am I right in concluding the stock is queenless? If so, will you inform me what is the best way to deal with the stock? The bees are a last year's swarm, which gave me about 25 lbs. of surplus honey. They are active and have had plenty of stores during winter, and are well supplied now. Name, etc., enclosed for reference.—W. T., Hollingbourne, Kent, May 14.

REPLY.—It is fairly certain that the queen of last year has gone; and if there are no signs of queen-cells it becomes clear that the mishap to her occurred during winter or when there were no eggs or brood in the hive. Your best course under the circumstances will be to purchase a laying queen and introduce her without delay. If this is done it will be needful to exercise great care in introducing the new queen, because bees that have been long queenless are less inclined to receive a stranger than when the loss is only recent.

[3419.] *Bringing Italian Bees from Milan.*—Is there any well-known breeder of Italian bees located in Milan, Italy? I have a brother staying there for a few months, and I should like him to bring a swarm back with him if possible. Thanking you in advance for reply. W. TURNER, Leeds, May 14.

REPLY.—Professor L. Sartori is probably the largest dealer in Italian bees in Italy. He is located in Milan, and a letter so addressed will readily find him. On the other hand, if your brother calls at the office of the Italian Bee-keepers' Association, Via Santa Marta, No. 18, he will be able to obtain every information with regard to getting stocks or swarms for bringing to this country.

[3420.] *Queen Cast Out Dead.*—This morning I found the enclosed queen on the alighting-board of one of my hives. I examined the hive this afternoon and found one queen cell (capped over) and only one. Would you kindly tell me:—1. If it is a very old queen? 2. If the bees have raised a young queen already before deposing and turning out the old one, how long ought I to wait before I can be sure of the new queen being hatched and fertilised by the presence of brood? There was a good lot of brood in the hive, and it is strong in bees.—G. H. F., Canterbury, May 13.

Later, 16th. The bees I wrote to you about last Friday swarmed this (Sunday) morning, the 15th, and after clustering for about twenty minutes went back again to their hive. Do you think the young queen came out for her flight and the bees accompanied her? If so, I suppose I might expect to find young brood in about a week's time. If you think this is so do not trouble to answer; I shall know by *not* seeing your answer in the B.B.J. next week.—G. H. F.

REPLY.—1. There was nothing to indicate old age in dead queen sent. Of course she may have sustained some internal injury to explain her being cast out. The capped queen-cell seen on the 13th shows that the bees were raising a successor to the deposed queen.

[3421.] *Using Combs from Infected Hives.*—I should be so much obliged if you will give me some advice through the "Queries and Replies" column. I had four stocks of bees, but had to destroy one this spring owing to foul-brood. It was not a bad case, but as the stock had never been a very good one, and the others are all strong and healthy, it seemed safest. Would there be any risk in using unfinished and drawn-out sections, taken off the hive last

autumn? I have several unfinished sections from all the hives mixed together, so must destroy all if necessary to destroy any. The hive was examined by an expert last autumn, and foul brood was not then noticed. Name enclosed for reference.—V. D., Ipswich, May 16.

REPLY.—We advise your being on the safe side—by using new foundation. The drawn-out combs do not count for much after all, as the wax from them can be utilised for household or other than bee-purposes. To infect one healthy stock by using the suspected comb would be false economy—to say the least.

[3422.] *Drone or Worker Brood?*—Will you kindly tell me through your journal if the enclosed brood is drone or worker, as I am not sure? I cannot find a queen in the hive. I conclude there is a fertile worker. The bees seem to be working very hard carrying in pollen, but all the sealed brood stands out above the comb as the enclosed. What would you advise me to do if they are queenless, as they have been the same all the spring? I have not another stock to join them to. There are a good number of bees in the hive, both drones and workers. I send name, etc., and sign—BRISTOL, May 13.

REPLY. — Only normal drone-brood in comb, not at all like that of a fertile worker, which is usually laid irregularly in cells. Are you sure there is no worker-brood in the hive? If none is seen on any of the combs it must be assumed that there is either an unmated or a worn-out queen in the hive.

[3423.] *Preparing for Queen Rearing.*—Will you be kind enough to tell me:—1. To what race or cross the enclosed bees belong? 2. Would you consider them a good hardy and prolific strain, and suitable for Mid-Wilts? 3. Is there any reason why queens should not be reared to fly at the same time as the drones? 4. The "Guide-book" (page 122) says, "As soon as this is found," etc., *i.e.*, as soon as drones are hatched out, place frame in for eggs. Can I not start a little earlier. For replies to the above queries I shall be very much obliged.—F. C. P., Wilts, May 10.

REPLY.—1. Bees are the ordinary brown variety. 2. Prolificness in bees cannot be judged by a few dead specimens, but the common brown bee will do as well as any for Mid-Wilts. 3. Yes; the selected drones should be reared as early as possible—for mating purposes—before ordinary drones are on the wing. 4. Don't depart from the directions given in "Guide Book" if you wish to do well with the bees.

[3424.] *Working for Increase.* — I have seven stocks of bees, and all fairly strong—i.e., the hives (holding ten frames each) are nearly full. What is the quickest and best way of increasing them, and what increase may I reasonably expect if I am willing to sacrifice all surplus honey to that end?—Name and address enclosed for reference. — BEE-KEEPER, Cheltenham, May 9.

REPLY.—You cannot do better than make artificial swarms, and form nuclei by dividing colonies later on as directed in "Guide-Book."

NOVELTIES FOR 1904.

"SWARTHMORE" QUEEN-REARING APPARATUS.

We have received from Mr. W. P. Meadows, Syston, the following particulars regarding the method of queen-rearing on what is known as the "Swarthmore" plan as adapted to the climatic conditions of this country. Mr. Meadows writes:—

"Directions for rearing queens by the 'Swarthmore' method as adapted to British requirements:—Prepare a five-frame nucleus hive, and fix in same three frames of comb containing fresh honey and pollen and a little water but no brood; space these so as to allow of a queen-rearing frame to fit on each side of a centre frame with the other two frames on the outsides. On a fine morning when most of the foraging bees are away, take the prepared box, also cell-holding frame, to a strong colony, and after inducing the bees to fill themselves with honey, remove quilts and shake the bees from four or five frames into the box, being careful not to take the queen. Replace cover on the box so that not a bee can escape, and carry to a dark, cool place and let it remain for six or eight hours. Into the centre of the colony from which you have taken the bees insert the cell-holding frame (Fig. 2) and cover up, leaving a slot in the quilt to correspond with space in frame.

In the afternoon remove a frame containing just-hatched larvæ from the stock you wish to breed from to a warm room, and withdraw the cell-cups one at a time, plugging each hole with an empty cup while the cell is being grafted, which latter operation is done by taking up the tiny larvæ with a camel-hair pencil (or a quill cut to a point and slightly bent), and gently transfer, with as much 'Royal jelly' as possible, to the cell-cups. When all cells are grafted, cover up very warm and let the bees work on the cups for twenty-four hours. Then take the box with the bees to

the hive from which the bees were removed, and place the cell-bars, with adhering bees, into the cell-holding

FIG. 1.

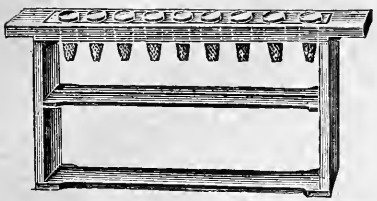


FIG. 2.

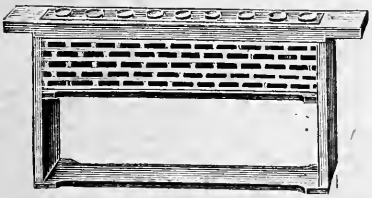
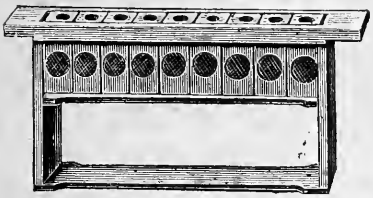


FIG. 3.



F.G. 4.

FIG. 5.

FIG. 6.

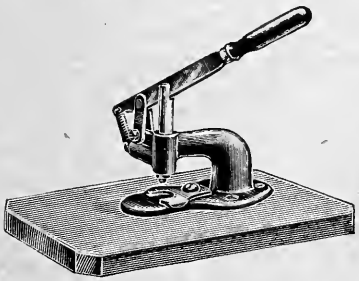


FIG. 7.

Description of Illustrations.

Fig 1.—Bored top-bar to fit cell-cups.

Fig. 2.- Frame complete with cell-cups in position for use.

Fig. 3.—Same after cells have been sealed over, with Queen Excluders fixed.

Fig. 4 —Cells taken out of top-bar and hung in nursery cage for hatching out, fitted with wire cloth each side.

Fig. 5.—Queen Nursery cage.

Fig 6.—Cell-cup.

Fig. 7.—Cell Indenting Press. A little molten is poured into Cell-cup while hot, and when nearly cold place Cell-cup under Press and indent the cell.

frame, slide in the queen-excluder on each side and shake the remaining bees in front of entrance; if honey is coming in freely the bees will complete the cells. If no stores are being gathered the bees must be fed.

After the honey-harvest it is better to remove or cage the queen for six days until the cells are sealed. Do not give one colony more than twelve cells to complete. After ten days from grafting, withdraw each cell and transfer to nursery-cage for hatching, taking care to provide the feed-hole with soft candy. The queens may be left in these cages until wanted.

Cage (Fig. 5) is admirably adapted for an introducing cage. Fill the feed-hole with candy and lay the cage under the quilts parallel with the frames on a colony which has been queenless at least twenty-four hours; the bees will themselves release the queen by eating away the candy.

A jointed celluloid quilt is supplied so that progress may be seen and frames added or withdrawn without much disturbance.

The above adapted appliances are in advance of any previously introduced. The several parts are simplified and made workable to every intelligent bee-keeper, and by their use queens of the finest quality can be reared without much disturbance to the colonies the eggs and bees are borrowed from.

The plan has been tested and very successfully used by Mr. J. Geary, Barwell, Leicester."

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 7 to 10, at Guildford. — Royal Counties Agricultural Society's Show. Bees, Appliances, and Honey Department, under the management of the Surrey Bee-keepers' Association. Twenty-one classes. Schedules from F. B. White, Hon. Secretary, Marden House, Redhill, Surrey. **Entries closed.**

June 21 to 25, at Park Royal, London.—Royal Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A. Increased prizes for B.K.A. Associations as arranged in divisions or groups of counties. Schedules from Edwin H. Young, Secretary, 12, Hanover-square, W. **Entries closed.**

July 14 and 15, at Grimsby.—Show of Honey Hives, and Bee Appliances in connection with the Lincolnshire Agricultural Society. Bee Department under the management of the Lincs. B.K.A. Fourteen classes. Liberal money prizes and silver medals. Schedules from R. Godson, Hon. Sec. Lincs. B.K.A., Tothill, Alford, Lincs. **Entries close June 14.**

August 4, at Kingsthorpe, Northants.—Honey Show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar of honey. (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford,

Hon. Sec., Kingsthorpe, Northampton. **Entries close August 1.**

August 10, at Wye.—East Kent Honey Show. Twelve classes for Honey and Bee Products. Seven open classes with liberal prizes. Practical Demonstrations in Bee Tent. Schedules ready shortly. John Tippen, Secretary, Wye, Ashford, Kent.

August 24, at Fleetwood.—Honey Show in connection with Fleetwood Floral and Horticultural Society. Open classes for Six 1-lb. Sections. Six 1-lb. Jars Light Extracted Honey and Six 1-lb. Jars Dark Extracted Honey. Schedules from Edward Cook, Hon. Sec., Rossall Grange Farm, Fleetwood. **Entries close August 14.**

August 24 and 25, at Leamington.—Annual Show of the Warwickshire B.K.A. in connection with that of the Warwickshire Agricultural Society. Schedules from James Noble Bower, Hon. Sec., Warwickshire B.K.A., Knowle.

August 25, at Llangollen.—In connection with the Sixth Annual Flower Show. Open classes for Six 1-lb. Sections, Six Jars Extracted Honey and Beeswax. Schedules from Frank Little, Brook Bank, Llangollen. **Entries close August 11.**

August 30, at Cartmel, Lancashire.—Honey show in connection with the 32nd Annual Show of the Cartmel Agricultural Society. Three open classes for Comb and Extracted Honey (prizes, 15s., 10s., 5s., and 2s. 6d.), and Beeswax (prizes, 10s. and 5s.), along with silver and bronze medals of the Lancs. B.K.A. Schedules from W. Cragg, Secretary, Cartmel, via Carnforth. **Entries close August 18.**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisement. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

*** Mr. J. Reeve writes from Tring, on May 13, to say he hived a good swarm for a friend on Thursday last, the 12th inst.

J. W. ("Jas."), Norfolk, under date May 14, writes:—"I am pleased to tell you that I have sold my bee-farm through advertising in the BEE JOURNAL. Thanking you for forwarding letters so promptly."

NOVICE (Welling).—Bee-Keeping Terms for Novices.—To explain the meaning of the several terms sent, such as "super," "brood-foundation," etc., would be entirely useless to a beginner who "hopes to succeed with bees." Our lady correspondent must procure a book on bee-keeping and read it carefully before she can have the slightest chance of success in bee-management.

"CYMRO" (South Wales).—Your ventilating floor-board is a useful idea, and should serve the intended purpose very well. There is no such risk as you suppose that we can see with regard to infringement.

JUMBO (Atherstone).—Honey Sample.—Though dark in colour, the sample is quite fit for table use. It is unevenly granulated, and shows slight signs of fermentation, probably through being kept in an unsuitable place. The honey is not at all bad in flavour.

Suspected Combs.

J. E. P. (Swansea) and E. M. L. (Hants).—Comb is badly affected with foul-brood, and as stock is weak we advise total destruction of bees, combs, and wraps. It is worse than useless to keep such stocks at this season; they are a constant source of risk to healthy colonies near at hand.

"GLAMORGAN VALLI."—There are slight signs of incipient foul-brood in comb, and the disease is apparently a recent outbreak. You should not send cash by letter post.

F. C. P. (Warminster).—No disease in comb sent. Dead brood is chilled only.

DOUBTFUL (Keswick).—Comb sent contains nothing more than pollen.

*** *Several Letters and Queries are unavoidably held over till next week for lack of space*

Special Prepaid Advertisements.

Twelve words and under, Sixpence; for every additional Three words or under, One Penny.

Advertisements for current issue must be received by first post on Tuesday.

WANTED 100 SWARMS, cheap for cash. HERROD & STEWART, "W.B.C." Apiary, Old Bedford-road, Luton. A 92

QUEENS FOR SALE. 1904, 6s. 6d.; 1903, 5s. The Apiary, 8, Grange Street, St. Albans. A 84

WANTED SWARMS (Quantity) 2 lb. Stocks 8s. DAWKINS Four Oaks, Sutton Coldfield. A 83

WANTED ONE or TWO FRAME-HIVES Complete. ELDERS, 8, Gray's-road, Stockton-on-Tees. A 86

FERTILE QUEENS, 4s. 6d. FOUR FRAME STOCKS, 15s. Queens and Stocks always on hand. FRANK REED, Portslade, Sussex. A 71

STRONG, HEALTHY, NATURAL SWARMS, 12s. 6d. Guaranteed safe arrival. CADMAN, Codsall Wood, Wolverhampton. A 73

ENGLISH BEES. NATURAL SWARMS, 2s. 6d. per lb. THOS. DENNIS, Rempstone, Loughton. A 85

ITALIANS, Simmin's "White Star." Carniolans. English. Doolittle's Italians, Swarms and Stocks. Half-price. HORTON, Flixton, Manchester. A 90

FOR SALE, 300 lb. EXTRACTED HONEY, in 30 lb. Tins or 1-lb. Screw-cap Jars. Sample 2d. Deposit, "W." care of *Bee Journal Office*. A 79

SWARMS, Natural, headed by 1903 Queens, supplied at once. Price 2s. 6d. per lb. Boxes returnable. W. H. WOODS, Hemingford Grey, St. Ives. A 89

SPECIAL OFFER. 1-lb. SCREW-CAP GLASS JARS, with Cork Wad, 19s.; ½-lbs., 16s.; Tie-over, 11s. 6d. per gross. REED, Sydney House, Brierley Hill. A 87

BEE GLOVES (with gauntlets), new material, safe and sure, 2s. 6d. post free. GREENHILL, Graham-road, Wimbledon. A 76

Editorial, Notices, &c.

INTERNATIONAL MEETING OF BEE-KEEPERS

AT THE "WORLD'S FAIR," ST. LOUIS.

We have much pleasure in publishing the following letter just received from Mr. C. P. Dadant, who writes in his official capacity as Vice-President of the American Bee-keepers' Association. Those of our bee-keeping friends who are visiting the World's Fair at St. Louis will, no doubt, if they avail themselves of the invitation, be cordially welcomed at the Convention referred to:—

"Office of Vice-President,
"Hamilton, Ills.,
"May 12, 1904.

"Mr. T. W. Cowan.

"DEAR SIR,—I am instructed by the Executive Committee of the National Bee-keepers Association of America to send an invitation to the different national bee-keepers associations of the world to join the American bee-keepers at their meeting which is to take place at St. Louis, Missouri, on the 27th, 28th, and 29th of September, 1904. The two first days of this Convention are set apart for an international meeting, to which the bee-keepers of the entire world will be welcome.

"We should very much like to have a delegation of British bee-keepers in attendance. Be so kind as to give notice of this invitation in the columns of your journal.

"St. Louis is the seat of the World's Fair, celebrating the purchase, one hundred and one years ago, of the territories of Louisiana from France by the United States. This exposition will be well worth the trip, and the time selected for the Bee Congress is the best for a pleasant voyage, as the months of September and October are unequalled for fair weather in the valley of the Mississippi.—Yours fraternally,

"C. P. DADANT,
"Vice-President,
"National Bee-keepers' Association,
"U.S.A."

BOARD OF AGRICULTURE.

BRITISH FRUIT CULTURE.

The Departmental Committee appointed by the Earl of Onslow, President of the Board of Agriculture, to inquire into and report upon the fruit industry of Great Britain, held sittings on the 17th, 18th, and 19th insts. The following members were present:—Mr. A. S. T. Griffith-Boscawen, M.P. (chairman), Colonel Long, M.P., Mr. C. W. Radcliffe-Cooke, Mr. Hodge, Mr. Monro, Mr. Vinson, Dr. Somerville, Mr. P. Spencer Pickering, M.A., F.R.S., the Rev. W. Wilks, and Mr. Ernest Garnsey (secretary). The following witnesses gave evidence:—Mr. Hodge, of Blairgowrie, Scotland, a member of the committee; Mr. Clark, K.C., the legal adviser to the Board of Agriculture and Fisheries; Mr. Bell, the Superintending Inspector of Taxes at Somerset House; Mr. Sams, of Worthing; Mr. Rochfort, of Cheshunt; Mr. A. J. F. Gibbons, of Guernsey; Mr. Russell, of Glasgow; Mr. George Bunyard, of Maidstone.

The next meeting is fixed for June 16, when Mr. T. W. Cowan, F.L.S., has been invited to give evidence.

BRITISH BEE-KEEPERS' ASSOCIATION

The monthly meeting of the Council was held at 12, Hanover Square, W., on Wednesday, 18th inst., Mr. T. I. Weston occupying the chair. There were also present—Miss Gayton, Dr. T. S. Elliot, Messrs. R. T. Andrews, W. Broughton Carr, G. H. Morrell, M.P., W. F. Reid, E. Walker, and the Secretary. Letters explaining unavoidable absence were read from Colonel Walker, Messrs. T. W. Cowan, R. Godson, W. H. Harris, J. B. Lamb, and F. B. White.

The minutes of the previous meeting were read and confirmed.

The following new members were elected, viz:—Mr. F. R. Court, Green Street, Sittingbourne; John Helme, Norton Canon, Weobley, R.S.O., Herefordshire; Geo. M. Tune, The Woodlands, Vroneysyllte, Llangollen; W. H. Turner, Moons Cottage, Ashingdon, near Rochford; Cambridge and Isle of Ely B.K.A., Hon. Secretary, Mr. G. E. Rogers, Wentworth Road, Cambridge.

The report of the Finance Committee was received, and together with recommendations in regard to payments, duly approved.

The Council made several nominations of judges and examiners in accordance with applications received from one or two county associations, viz.:—Warwickshire, August 24, and Glamorganshire, July 27.

Correspondence with the Secretary to the Board of Agriculture *re* a suggested improvement in the illustration to the Board's leaflet on "Foul Brood" was placed before the Council. A further letter from Mr. Geo. Saunders, Hon. Secretary to the Cumberland B.K.A. *re* "Foul Brood Legislation" was also read.

The Secretary reported the result of an interview with the Secretary of the Royal Botanic Society, and it was decided to, if possible, arrange for a lecture and demonstration on "bee-keeping" to be given at the show, which will be held in Regent's Park on Wednesday, July 6.

It was resolved to make a grant of £15

towards the prizes in the Honey Classes at the Dairy Show, to be held in October next, and the "Schedule" was revised for approval by the British Dairy Farmers' Association.

A considerable portion of the sitting was occupied by lectures delivered before the Council by seven candidates for First Class Diplomas.

The next meeting will be held on Wednesday, June 15.

CUMBERLAND B.K.A.

ANNUAL MEETINGS.

The third annual meetings of the above Association were held, as usual, in several districts of the county, those for 1904 taking place at Carlisle, Penrith, Whitehaven, and Keswick, on May 5, 10, 12, and 18, respectively. There were thirty-three members present in all, and eleven wrote regretting they could not attend. The reports showed a total membership of 371. Thirty-nine lectures were given, the total attendence numbering 1,193 during the year.

The experts had made 585 visits during the year, enrolling 142 new members. During the experts' tours 110 apiaries were found to be infected with "foul brood." Altogether 1,562 stocks of bees were examined, and of these 310 were diseased.

The balance-sheet showed an expenditure of £174 14s. 11d., which was met by the receipts, except £1 7s. 11d., still owing to the bank. The County Council grants amounted to £107.

The proposed "Foul Brood" Act was unanimously approved of, also the remainder of the agenda.

The Right Hon. the Countess of Carlisle, the High Sheriff, the Mayor of Carlisle, and Henry Fox, Esq., C.C., were added to the list of Vice-Presidents, and the usual votes of thanks passed.—GEORGE M. SAUNDERS, Hon. Secretary and Treasurer.

CAMBS. AND ISLE OF ELY B.K.A.

The Executive Committee met on Saturday, May 14, under the presidency of Mr. C. J. Mapey.

The Hon. Secretary's report was very gratifying, new members being continually enrolled, and the reports to hand from the district hon. secretaries were of the same nature, and letters of inquiry from bee-keepers throughout the county showed that considerable interest was being evinced in the aims and objects of the Association. The names of those deciding to take the *Bee-keepers' Record* are still increasing, and a considerable number of members' hives are already insured. The contemplated appointment of a duly qualified expert for the county has been postponed for the present, in consequence of the small number of members requesting a visit. The Hon. Sec. was therefore requested to arrange with the hon. experts to make the required visits for the present season.

The Hon. Sec. reported that arrangements were being made for a honey-tent at the forthcoming county show at March.

The Hon. Sec. was also instructed to write the County Council requesting a grant towards payment of a lecturer for visiting the rural districts for the purpose of giving instruction in bee-keeping.

Considerable interest was taken in a report of the Hon. Sec. respecting a case of foul brood which had come under his notice, viz., that of a stranger who had bought an apiary as it stood, and represented as eighty-three stocks; there are now only forty-four of the whole number alive, twelve being fairly strong, the remainder very weak, and all suffering from disease. The case has been taken in hand by an expert, who says it is the worst case he ever saw.

A vote of condolence, proposed by the Chairman in sympathetic terms, was passed, and an intimation thereof to be conveyed to Dr. Sidney Wood, District Hon. Sec. for Bottisham, on the death of his brother, Mr. Reginald Wood, C.E., of Canny Hall, who was accidentally drowned whilst attending to work in connection with his apiary.—G. E. ROGERS, Hon. Sec.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "THE EDITORS of the 'British Bee Journal,' 10, *Buckingham-street, Strand, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 10, *Buckingham-street, Strand, London, W.C.*"

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

SOME BEE STATISTICS.

[5532.] The following figures have been gathered from the best and most reliable sources, but the compiler will not vouch for their entire accuracy, further than to say that he believes them to be within measurable compass of the exact truth. Readers who have available more exact data will oblige by supplying the precise

figures—in round numbers, of course—and further supplementing my list. Number of hives in some of the chief honey-producing countries: United States, 4,500,000; Germany, 2,000,000; Austria, 1,800,000; Spain, 1,700,000; France, 1,000,000; Great Britain, 500,000; Holland, 250,000; Belgium, 200,000; Denmark, 100,000; Greece, 50,000; Switzerland, 30,000.

If these figures are correct, the United States may well arrogate to herself the proud title of "the greatest bee-country in the world." Just fancy a country producing honey which, loaded on cars, would make a train twenty-five miles long! Austria is undoubtedly one of the leading honey-producing nations, and excels in organisation, for she has a Bee-keepers' Association numbering over 8,000 members. Their income, amounting to over £1,500, is augmented by a public grant of about £600; and they insure all bee-keepers, irrespective of the number of colonies in their possession, for the small charge of less than 6d., guaranteeing "to make good any losses from foul brood, fire, theft, etc." In no other country on the Continent, however, is agriculture so well organised or so successfully carried on as it is in Germany, and her bee-literature is second to that of no other country, while for scientific knowledge of bee anatomy she stands an easy first.

"*Springing Bees.*" — Much has been written in the past on "wintering bees," but, to my mind, the problem waiting to be solved is how we can carry them over that period of spring so fatal to bee-life. It seems to be the almost unanimous experience of this and last year that bees carefully winter-packed came out in early spring little impaired in numbers, but to the astonishment of many, on the advent of milder weather, when they began to take occasional flights they dwindled to an almost unprecedented extent; so that what looked in March like very strong stocks are now in May very second-rate indeed. The phenomenon seems to be attributable to the past very bad season, which has had a serious reflex influence on the dawn of this one. During the past summer breeding was up to the average, but, owing to the inclement weather, the early cessation of the honey-flow, and the enforced inaction of the bees, increase was checked at an earlier date than usual; yet by keeping the older bees indoors idle it gave them a longer spell of existence. Hence, hives were very numerous in bees at the time of winter-packing, many being abnormally so, as several noted. But they were only seemingly strong, because they lacked the young and vigorous newly-hatched workers, which prove the mainstay of the most progressive colonies in the late spring and early summer. The few were young, the many were already in the sere and yellow leaf, and at their first venturing forth in spring they dropped quickly out of the race, and so the hives became depopulated, instead of increasing rapidly as in good years.

Heavy Winter Losses.—We have to record heavy losses all over the North. Reports agree that far too many are dead, while weak colonies are the rule, and strong ones the exception. In Ireland the death-rate has been abnormally heavy, I think particularly in humid situations, and in America outdoor winterers have suffered to an unprecedented extent, judging by latest accounts. Personally, while having nothing to complain of in the way of absolute loss, I never had so large a proportion of "weaklings" in the middle of May. Spring forgot to pay us her annual visit, and winter lingered on into the present month; yet vegetation is, on the whole, well forward, and if weather would only keep good our prospects might still be viewed with equanimity.

Bees' Vitality.—Mr. Hooker's example (5520, page 182) of the survival of an Italian lot of bees under the most unfavourable circumstances is very interesting, but I should not like it to go forth that his deduction, that "A lot of additional packing is unnecessary," is wholly correct, simply because this one lot pulled through. During the late very inclement weather a number of gipsies lived out near here under a canvas tent. But none of us would deem it advisable thus to revert to the condition of our forefathers, so bees are best wintered when warmly wrapped up. — D. M. M., Banff.

UP-TO-DATE QUEEN-REARING.

HOW TO REAR GOOD QUEENS WITH THE LEAST LABOUR AND EXPENSE.

[5533.] Several of the large queen-breeders of the United States have thoroughly established the fact that virgin queens can be successfully mated from small boxes containing one or two small combs, with about two or three hundred bees to stock them. They have, in consequence, given up the old, unnecessary, and wasteful way of sacrificing time by breaking up strong colonies to form nuclei of three full-sized frames of comb covered with bees, etc.

By the "up-to-date" method, it is only necessary to take a few bees from the colony, which latter soon recovers, and will produce as much surplus honey as the average of other hives in the apiary.

I have had the opportunity of witnessing the rearing and mating of hundreds of queens on this place, and am sure, if

intelligently carried out, there is no reason why the same cannot be done in England. On one occasion I was present when a small nucleus was examined; I saw the queen with the evidence of recent fertilisation having taken place, there were only twenty-five bees present in the fertilising box, most of the old bees had returned to parent colony. Mr. W. H. Laws, one of the largest queen-breeders in the United States, has an article in *The Beekeepers' Review* of March 15 last, headed "Mating 300 Queens by Using the Bees of Only One Colony," in which he describes this method. He says: "I have 1,000 little combs and 750 of the little boxes, and I believe that with cells hatching at the proper time 2,000 or more queens can be mated in thirty days . . . . I have mated 150 virgins with the bees from one colony, and left enough bees in the colony to maintain the home . . . . While I do not recommend less than 100 to 200 bees in each mating box, I have had a queen mated and laying with only ten bees by actual count." Others have reported about the same experience with these miniature nuclei.

The first thing to decide upon is the size of the small boxes, which should be made to take two small frames (of thin stuff like sections) to fit into the standard frames, the boxes being filled with clean old comb. They should then be placed over a strong colony, in order to have the combs firmly fixed and filled with honey. As soon as the frames are finished, cells should be started in compressed cups filled as described in my article on "Queen-Rearing in America," in BEE JOURNAL of September 17 and 24 last year.

I am told that suitable small mating-boxes, with frames to fill the standard frame, and a complete outfit, lucidly illustrating the latest and most approved American method of queen-rearing will be exhibited at the coming "Royal" Show in June next. Each part will be carefully marked in such a manner that even the novice will understand the entire *modus operandi*.

The cell-cups must be prepared with wax, ready for the bees to work upon, before transferring the just hatching larvæ simply by smearing the new cell-cups with royal jelly; this is all that need be done to them. Select a strong colony and dislodge the bees from three or four frames of brood into the swarm-box. The latter is ventilated with wire-cloth nailed to the bottom, raised on ¾-in. strips at either end. Be careful to see the queen is left in the colony before closing. The bars containing the cups are now inserted in the top, and the bees confined in hopeless queenlessness for five or six hours. At the expiration of that time they are prime, and will have prepared the cups ready to receive the larvæ. The cups are then drawn (like corks) one at a time, and larvæ transferred to them. Each cup is returned to its hole as soon as grafted. This grafting work is usually done at about four in the afternoon, and by the following morning they will be well drawn, when the bar with cells is shifted into a nursery cage, previously placed in the midst of a powerful colony, for the bees to enter, and to feed and care for the larvæ and complete the cells. The bees in the ventilated hive, or swarm-box, are then shaken in front of the colony from which they were borrowed, when they will run in, and all will be well again in that hive. As soon as the cells are ripe, they must be withdrawn, and either given to nuclei, or, if it is desired to hatch the virgins, the cells are quickly shifted to wire-covered nurseries, or the separate cages may be used, as will be demonstrated at the "Royal" Show. Virgin queens much over ten days old are nearly worthless, therefore, should be given a chance to mate soon after they are five days old. It will be seen that during the time the larvæ are being fed and the cells are sealed, they are in a full colony, in which they will have the heat and the constantly hatching young nurse-bees to tend and feed them, as in preparing for swarming. They are fully developed and strong before being given to the small nuclei to mate. Mr. Alley says "young queens, as a rule, commence to lay from thirty-six to forty-eight hours after they become fertile." The ease with which the compressed cell-cups, or completed cells, can be inserted or removed from a "Swarthmore" nursery-cage is highly satisfactory. In fact, it is an invaluable feature to be able to draw, replace, or interchange one's queen-cells at will without the least disturbance to the bees, without smoke or veil, and even without opening the hive proper at all. It has been said that removable queen-cells are as valuable to the queen-rearer as removable brood-combs are to the honey-producer.

It is often desirable to feed the bees in the nuclei to prevent this swarming out while being tested. The nuclei should be placed in shady places, and when the queen begins to lay the flight-hole should be covered with excluder-zinc, in order to prevent the queen from leaving the mating-box.

Directions for Stocking the Mating-Boxes.—After the virgin queens have hatched in the cages, go to the colonies in which the small frames were put, and draw enough to equip the desired number of fertilising boxes, each with one comb of honey, and one empty or partly-filled comb. Slip the combs into position under the

holding staples in the lid, open the ventilator, and close the flight-hole; and then carry the boxes to a queenless colony to be filled with bees. Smoke and drum this colony until the bees are well filled with honey. Now remove the roof, and dislodge all the bees from the combs into the hive they occupy, and after they have quieted down somewhat, and have formed a cluster up the side of the hive, dip a small teacupful into each box, closing each lid directly the bees are emptied into the fertilising box. (A small, long-handled tin "dipper" is useful for this work.) When all the boxes are supplied with their quota of bees, set them aside in a cool place for a few hours—long enough for the bees to realise their confinement. If the boxes are made up at midday they will be ready to receive the virgin queens about four o'clock. When all is in order go to the nurseries and draw virgins enough to supply the boxes, and immediately proceed to run one into each box through the covered hole in the lid. Turn the slide carefully, so as not to pinch the queen, holding the thumb over the opening all the while, until the opening is quite closed again. After the queens are all in set the boxes aside until dark, when they may be hung on some fence or other, some distance from the old stand, or they may be hung out early the next morning, opening the flight-hole quietly at the same time. Some of the bees will return to the old hive, which should be left in its original position to receive them. A frame containing hatching-cells may be given later. If the boxes are to be taken some mile or more away, less bees will be lost to the nucleus; they should then be released at dusk.

If the virgins have been hatched five days they will fly and mate the following day, and in a day or two more they will begin to lay. If it is desired to keep the queens in the boxes for several weeks, slide the zincs into place over the flight-holes, after they begin to lay, to prevent the queens from leaving the boxes. When laying queens are removed from the boxes let the bees remain queenless for three days, and then brush them all out before the hive from which they were taken, and return the combs to the large frames to be refilled for another mating. Several queens can be mated from each box, however, if the combs are changed and the bees confined, as in the first making up; or a ripe cell may be inserted—in this event you must give a little sugar-syrup every three or four days — feeding is quickly accomplished by inserting small screw-top bottles having a few holes in the top. Changing the location of the boxes to distant yards will prevent swarming out to a large extent, allowing one to mate several virgins with one making up, but do not attempt to maintain the little colonies if there is no work they can do in mating or preserving queens; brush them out, and return all combs of honey and brood to the full stocks; they can easily be made up again.—JOHN M. HOOKER, 4,422, Chestnut Street, Philadelphia, U.S.A.

BEES IN THE NORTH OF SCOTLAND.

[5534.] It is not a little tantalising to see the accounts in the BRITISH BEE JOURNAL of fine weather and bees in good condition in the South. In the North we are having a most unfavourable spring for them; it has been so cold that it was only yesterday (May 17) that I ventured upon an examination of some of my hives. The thermometer has rarely reached 50 deg. Fahr. in the shade till the date mentioned, when it rose to 65. My recollections in bee-keeping go back for some fifty years, but it is only of quite recent years that I have begun to understand in measure their proper management—I am yet a learner. Bees are strange unaccountable little things. Since coming to this neighbourhood I am always losing my swarms; they seem to have a liking for the roofs of my neighbours' houses. I never remember losing a swarm in Edinburgh, where I kept bees for many years. Here I have known a swarm leave the hive, and go off even after they had commenced comb-building. Another thing I have learned since coming to this part of the country, that is, that there may be plenty of flowers and little honey in them. All round this neighbourhood there are sycamore trees, but I scarcely see a bee upon the flower. When living as a lad in the South of England there was a large sycamore in my father's garden, and a man came and asked to be allowed to hive the swarm of bees that had gone into it. It was only the bees upon the flowers gathering honey!

Again, there is white clover, and the bees work on it, but seem to get little; the soil is poor and deficient in lime, which white clover delights in.

Speaking of swarms going off, I am inclined to think there is something more in the old homely mode of ringing bees with a frying-pan and a key than most people are supposed to believe. Last summer I was determined, if ringing would secure my swarm, they should have enough of it, and I made noise enough to be heard half over the parish. I observed that they alighted very rapidly, and though the hive was a strong one, the swarm was small; it seemed to me that the ringing not only made them alight quickly, but stopped their coming out. This is not to be won-

dered at, for bees undoubtedly follow the hum made by their fellows, and the queen probably is heard by them, and an understanding is come to as to their motions, but all this conversation amongst them is stopped by the din of the frying-pan drowning their voices. Now, I would like to ask my fellow bee-keepers a question. I do not remember ever having read or heard of any one noticing a peculiar habit common to all hive bees, that is, the workers. Every bee just as it emerges from the hive stops for an instant, and passes its two front legs over its antennæ. This is an invariable rule, as far as my observation has gone, on all ordinary occasions, when a worker goes out to forage; I am not so sure about it when they swarm, for then there is such a hubbub and rush it is more difficult to observe, but I am inclined to think that even then they do the same thing. I once spoke of this to old Thomson, of High Blantyre, but although such an authority on bees he never seemed to have noticed it. I should much like to hear the thoughts of others on the subject, and will not give my own at the present time. I send name, etc., for reference, and sign—HUMBLE BEE, Bridge of Allan, N.B.

BEE NOTES FROM IRELAND.

[5535.] It is nearly a year since I sent you a bee-note from Ireland, so here I am ready and willing to rectify the omission.

Though the season here is, on the whole, very late, the weather for the past two or three weeks has been more than fairly favourable for the growth and welfare of the apiary. An east wind has, however, been more prevalent than is at all desirable. Two of my four stocks are supered (May 12 and 15 respectively); the other two are having enough to do to hold their own on ten frames each. Curiously enough, the strongest hive, which has already taken possession of a large rack provided with section-combs from last year, has not had—nor needed apparently—a drop of syrup this spring. The other three, two of which are the above-mentioned shaky ones, have been carefully and continuously fed since March. This I account for by the fact that the forward colony is in a very sheltered position, protected by walls on the North and North-East. At all events, it invariably comes out strongest and does most.

The fruit blossom has received, and is receiving, a considerable share of attention from the bees, and fortunately the weather is such as to allow of its valuable sweetness not being wasted. The cherry-bloom—now some weeks done—was magnificent, and, as usual, daily hummed with the busy gatherers. The bees always seem attracted to this blossom more than that of apple, pear, or plum, and remain on it in great numbers long after there is not so much as a belated wayfarer in the vicinity of the other trees.

My time is much more occupied now than in previous bee-keeping years, but the work will have to increase abnormally before I shall forsake the most fascinating of my many hobbies—the bees. Even bad seasons—and both 1902 and 1903 were simply execrable—had no power to lessen the charm which is inseparable from this most delightful of avocations. Still, engrossing as the study of "the life of the bee" undoubtedly is, apart altogether from the production of white-capped sections, one does not object to have these and other not superfluous attractions to increase, if possible, the favour and satisfaction with which one regards that cherished corner of the garden where are picturesquely grouped the "homes of the honey bee." Therefore, in the hope that the present promises of a good time to come will be redeemed by that presiding genius, "the clerk of the weather," or his local subordinates, I heartily wish all bee-lovers on both sides of the Channel a happy and prosperous season. I send name, etc., for reference, and sign—DUBLIN BEE, May 16.

REVIEWS OF FOREIGN JOURNALS.

By "Nemo."

In the *Schweizerische Bienenzeitung*, Jos. Theiler, the manager of the insurance department of the Swiss Bee-keepers' Association, announces that he is prepared to take insurances from affiliated societies on behalf of their members. He does not insure single bee-keepers, so that anyone wishing to have the advantage of insurance must belong to a bee-keepers' association. It would be a good plan if the same system were adopted in this country, and bee-keepers only joined those societies who would undertake insurance for them.

In the same journal M. Schaffner says that the rocking of the bees and the shaking of the abdomen is only seen when colonies are strong and the ingathering is good. In weak colonies these movements do not take place at all, and seldom occur even in strong ones if nectar gathering has been suspended for some time. He thinks that these movements are an expression of pleasure. Many years' experience has assured him that these movements are a sure sign of approaching swarming. When, on a comb, nearly all the bees are shaking, and making a distinctly heard noise, a swarm may with certainty be expected the next day.

In the *Münchener Bienenzeitung* a method of obtaining good honey from combs is given for those who have only a small quantity and have not got an extractor. After removing as much of the impurities as possible from the combs, they are placed in a metal saucepan which is suspended in a large copper of water brought to boiling point. At a temperature of 104 deg. to 120 deg. the wax melts, and then the saucepan is placed in a cool place. The wax which floats on the surface is then removed, and the honey strained and put in jars. We are assured that honey treated in this manner does not lose its aroma or the formic acid it contains.

In the *American Bee Journal* Mr. Horn describes a new method of introducing queens. It is very simple, and consists simply in plunging the queen in a cup of clean water for five seconds, holding her by the wings.

In *Gleanings* E. F. Phillips describes experiments he has undertaken in conjunction with Dr. D. B. Casteel, of the University of Philadelphia, to determine the reasons for the variation in the bodies of drones. The facts brought out by the measurements were that "the drones vary more than the workers, and that the variation depends on the cell from which the bee hatches." A drone from a worker-cell is long and narrow, with long narrow wings, while a drone from a full-sized drone-cell is fat, and has wide, strong wings. He points out that, as the size of drone and his development depend on the cell from which he comes, it is of the utmost importance that full-sized drone-comb be furnished when the drones are to be used for fertilising queens. If nothing but worker foundation is given to the bees, the drones will be small, and their organs will not get a chance to develop as they should, and their wings are not strong enough to support them when they take the marriage flight with the queen. Although a small drone can fertilise a queen, it is from the largest and strongest that a strong progeny can be expected.

Queries and Replies.

[3425.] *Dealing with Diseased Stocks.*—I have purchased a new hive, and propose to transfer bees to it as directed in paragraph 3, page 154. The four worst frames I have burnt, and burnt combs. The other frames appear tolerably healthy and have both sealed and unsealed brood. 1. Shall I do best to transfer these frames to new hive after spraying with solution No. 8, or would it best to put all new frames fitted with "Weed" foundation into the new hive, first brushing the frames over with syrup, medicated with phenyle? 2. If so, would it be necessary to spray the bees first with solution No. 8, immediately giving syrup medicated with phenyle as recipe No. 7? This plan would mean throwing away as much brood as would fill about two frames, but you might think this preferable to risk of transferring brood-frames from the affected hive. As this is only my third year with bees I am hardly an expert, though I had 120 lb. of honey from two hives last year.—EDWARD BOVILL, Ipswich, May 17.

REPLY.—1. You had better adhere closely to the directions given in "Guide Book," which latter says nothing about "brushing frames over with syrup medicated with phenyle." 2. No; the bees should not be sprayed at all.

[3426.] *Bee-keeping at Orange River Colony, S.A.*—Can you or any of your readers give any information as to bee-keeping at Petrusburg, Orange River Colony, S.A.? I have a friend out there who is seeking information on the subject, and I will be thankful for such, as well as any addresses of bee-keepers in that district. A reply in the B.B.J. will oblige.—W. J. FRASER, Cumberland, May 23.

REPEY.—Many letters relating to bee-keeping in South Africa have appeared in our pages from time to time, but we cannot say if any information worth specially refers to the Orange River Colony. In our issue of November 19, last year, there are two interesting communications on the subject, one dated from Port Elizabeth, Natal, the other from the Transvaal. No doubt this will meet the eye of some B.B.J. reader in South Africa who has personal knowledge of Orange River Colony, and if such would write a line giving the information required we will be obliged. On the other hand we may say modern bee-appliances and bees may be had in many parts of South Africa.

[3427.] *Bee Farming for Profit.*—I have been a reader of your journal for the past three years, and can most earnestly say I more than appreciate its pages, from the scientific and instructive manner in which the practical side of bee-keeping occurring in every-day apiary work is more or less from time to time so clearly and explicitly explained, at same time never omitting the most instructive literature we invariably get treating the theoretical part in all the newness of the day. Kindly excuse me for taking up your valuable time, but if space will allow I shall be pleased if you will answer me a few questions in the next issue of the B.B.J. The questions I would ask are:—1. What country would you consider the finest in

the world for bee-farming, taking into consideration the most important points? 2. Presuming that I am about to start bee-farming as a profession, and have had a thoroughly practical and theoretical training, while saving sufficient cash to start a small out-apiary and be independent of the business for twelve months. Generally speaking, would you say, providing the man is of the right sort, the climate and the country suited to all the necessities of bees, and there is always a ready market on hand, that he would be likely on these terms to make for himself an independent future—by this I mean in five to ten years establish a business large enough to maintain himself, wife, and family, putting away at least £100 a year after clearing off all expenses? 3. Can you give me an idea of the value of a bee-farm turning over £500 a year clear profit? 4. Would you generally say bee-keeping is a good means if properly conducted of obtaining a livelihood? I hope I have not asked too many questions, but I have only endeavoured to show my interest in the B.B.J., whilst I feel an equal right to share an occasional corner along with our readers. I trust our Editors will excuse any errors I may have made in any form. I will now close, wishing all our readers a bountiful honey-harvest for 1904.—S. F. B., Whalley Range, Manchester, May 11.

REPLY.—On the broad question of bee-farming for profit, we would first say that, so far as regards this country, the income derivable from bee-keeping is too uncertain for anyone to rely upon honey-production as a sole means of livelihood. It will always stand as a valuable adjunct to the business of a fruit and flower grower; or that of poultry-raising, but the honey-crop cannot be other than precarious owing to adverse seasons. For this reason, then, we do not advise anyone to venture very far in trusting to bee farming for his sole income. Some make a fair amount from the sale of bees and queens, while others combine the latter with the manufacture of hives and appliances. In reply to the several questions enumerated we may say: 1. There is no country that stands out as "the finest in the world for bee-farming," though there are many places in America where bee-keepers own apiaries of several thousand colonies of bees and live by the work of the bees along with very hard personal labour on the part of the bee-master himself. 2. Beyond saying that there are men who have made, and still make, a good living from the bees, we do not care to go further, as the question is so entirely one of capacity to make money by hard work and aptitude for the pursuit. 3. We do not know of a bee-farm where so much "clear profit" as £500 per annum is made. We advise starting in a small way and judge by results attained.

[3428.] *Bees "Balling" Queen in May.*—As a reader of your journal for over twelve years, and as one who has not troubled you much in that time, I would feel obliged by your opinion on the undernoted experience. On Friday (20th) morning, some time between eleven and twelve o'clock, I noticed on the flight-board of one of my hives a ball of bees about the size of a small hen-egg. I suspected it was a case of queen "balling," and subsequently this proved correct. The bees composing the ball I stirred with a small stick, but so intent were they on their work (or murder) that they would not separate, and I lifted them bodily on to a board and carried them away from the hive. I then got them to disperse, and found inside the said ball a fresh-looking young queen (not this year's queen). I carefully put her in a bottle and then went and examined the hive—first examination this year, so they had not been disturbed. Though I did not subject combs to a minute inspection, I could find no queen; but eggs, workers, and drone brood in all stages of development, a strong and prosperous colony to all appearance. I could understand the bees "balling" a strange queen, and what I wish to know is the reason why they were "balling" their own queen that had been in the hive with them all through the winter? Needless to add that, after a good dose of smoke, I put the temporarily dethroned queen back into power, and to-day things seem to be going on as merry as the proverbial marriage bells. Your kind reply in next issue will be esteemed (name enclosed for reference).—BONNIE GALLOWA', Galloway, N.B., May 21.

REPLY.—It is quite impossible to judge of the reasons why bees "ball" their own queens in cases like yours, and when we have description only to guide us. The adage, "Bees do nothing invariably," aptly applies to the case, but had we a chance of inspecting the hive and queen it might have been less difficult to account for what has happened. We should like to hear how the colony progresses later on.

[3429.] *Suspected Loss of Queen.*—I wish to solicit your opinion of the following circumstance:—Last summer a bee-keeper in this locality purchased from a noted apiarist in England a nucleus of his particular strain of Italian bees, with alleged 1903 queen. Towards the end of autumn they were understood to have contracted foul brood. However, they were successfully transferred to clean sheets of foundation and fed up before winter. Before packing for winter, the queen was seen to have continued laying. On examination this spring they were found to be rather few in

numbers, with small patches of brood on two frames. Now, the remarkable feature of the case is that the patches consist of worker largely intermixed with drone brood. The queen at present in hive is very small, with no pretention to maternal honours so far as looks go, and does not appear to be the original queen. The points on which I wish to have your judgment are whether this be the original queen with failing powers, or that she has been damaged, and the bees have reared a successor late in autumn who has been imperfectly fertilised. A reply in BEE JOURNAL will oblige. I send name, etc., and sign—G. R. W., Fife, May 16.

REPLY.—Our view is that the queen now heading the colony is the original mother-bee of the stock, but that her fertility is nearly exhausted either from age or non-prolificness. The idea of the old queen being replaced by a young one, and that the latter has only been partially fertilised, will not hold good.

[3430.] *Using Combs from Hives in which Bees have Died.*—When the bees in a hive have died during winter from starvation, can one use the frames of comb again after spraying with carbolic solution? Name sent for reference.—W. D., London, E.C.

REPLY.—Certainly, if bees have, as stated, died from starvation only, and were free from disease.

Echoes from the Hives.

St. Budeaux, Devonport, May 17.—I had a grand swarm on May 3. I have not heard of any earlier swarms before, so I suppose I am the first for this season, unless someone is before me?—J. T.

Kildare Apiary, Lower Edmonton, May 17.—I have just had a fine swarm from one of my hives. Am I in the distinguished position of being first to report a swarm for this year, or have you heard from other readers of such an early lot?—JOSH. D. WATTS.

Stechford, Birmingham, May 17.—Just an "Echo" to say I had a swarm from one of my frame-hives yesterday afternoon, which is the first I have heard of this season. Have you heard of one earlier?—A. E. B.

Cheshire.—Mr. Knowles, Neston, Cheshire, had a very large swarm of bees on Friday, May 20. The day was very fine, and the stock was removed and divided, and swarm hived on old stand.—JAS. WADDELL, Expert C.B.K.A.

NOVELTIES FOR 1904.

ABBOTT BROS. NEW MANIPULATING TABLE.

Patent applied for.)

Messrs. Abbott Bros. send particulars of their new folding table for bee-keepers' use in the apiary or in the bee-tent as a manipulating table, and for general use on lawns and in summer-houses, its strength combined with lightness adapting it for numerous outdoor and indoor purposes. The engravings show its construction, and the manufacturers claim for it the following advantages:—"Weighs

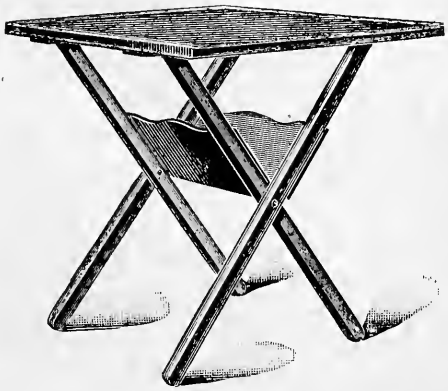


TABLE OPEN.

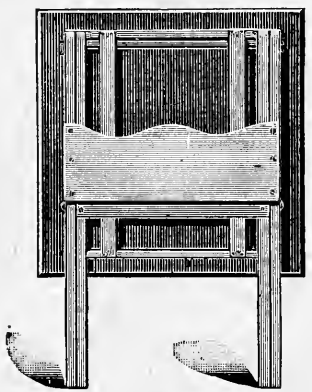


TABLE CLOSED (Flat 2¼-in.).

only a few pounds. Will carry 3 cwt. Height 26 in. Top 24 in. square. No cross-bars to break or get in the way of your legs. Perfectly rigid when open and flat when closed. Has no weak points and requires no packing. Leg and frame work made of deal. Top and folding pocket made of stout 3-ply waterproof boards. Suitable for display tables at exhibitions, manipulating tents, lawns, gardens, bee and summer houses. It is also made in superior woods, and varnished, stained, painted, or enamelled to order."

[Sample table is very good indeed.—EDS.]

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 7 to 10, at Guildford. — Royal Counties Agricultural Society's Show. Bees, Appliances, and Honey Department, under the management of the Surrey Bee-keepers' Association. Twenty-one classes. Schedules from F. B. White, Hon. Secretary, Marden House, Redhill, Surrey. **Entries closed.**

June 21 to 25, at Park Royal, London.—Royal Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A. Increased prizes for B.K.A. Associations as arranged in divisions or groups of counties. Schedules from Edwin H. Young, Secretary, 12, Hanover-square, W. **Entries closed.**

July 14 and 15, at Grimsby.—Show of Honey, Hives, and Bee Appliances in connection with the Lincolnshire Agricultural Society. Bee Department under the management of the Lincs. B.K.A. Fourteen classes. Liberal money prizes and silver medals. Schedules from R. Godson, Hon. Sec. Lincs. B.K.A., Tothill, Alford, Lincs. **Entries close June 14.**

July 27, at Henbury, near Bristol.—Annual Show of the Henbury District Bee-keepers' Association in connection with the Horticultural Society's Exhibition. Several open classes with good prizes (two classes with free entry). Schedules from the Hon. Sec., J. Atkin Waller, Pen Park, Westbury-on-Trym, near Bristol. **Entries close July 22.**

August 1 (Bank Holiday), Windsor District, Berks, B.K.A.—Annual Show of Honey and Bee-Appliances in conjunction with the Clewer Horticultural Society, in the grounds of Clewer Manor (by permission of E. B. Foster, Esq., J.P., C.C.). Open classes for Observatory Hive, Twelve 1-lb. Sections, and Twelve 1-lb. Jars Extracted Honey. Also classes for Berks only, and for Windsor District only. Schedules from W. S. Darby, Hon. Sec., Consort Villas, Clewer. **Entries close July 23.**

August 4, at Kingsthorpe, Northants.—Honey Show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar of honey. (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Hon. Sec., Kingsthorpe, Northampton. **Entries close August 1.**

August 10, at Wye.—East Kent Honey Show. Twelve classes for Honey and Bee Products. Seven open classes with liberal prizes. Practical Demonstrations in Bee Tent. Schedules ready shortly. John Tippen, Secretary, Wye, Ashford, Kent.

August 24, at Fleetwood.—Honey Show in connection with Fleetwood Floral and Horticultural Society. Open classes for Six 1-lb. Sections. Six 1-lb. Jars Light Extracted Honey, and Six 1-lb. Jars Dark Extracted Honey. Schedules from Edward Cook, Hon. Sec., Rossall Grange Farm, Fleetwood. **Entries close August 14.**

August 24, at Sandbach.—Honey Department of the Cheshire Agricultural Society's Show, under the management of the Cheshire B.K.A. Open classes for Hives, Sections, and Extracted Honey. Substantial prizes. Bee Lectures and Demonstrations on the show-ground. Schedules from T. A. Beckett, St. Werburgh's Chambers, Chester. **Entries close August 3 (at double fees August 10).**

August 24 and 25, at Leamington.—Annual Show of the Warwickshire B.K.A. in connection with that of the Warwickshire Agricultural Society. Schedules from James Noble Bower, Hon. Sec., Warwickshire B.K.A., Knowle.

August 25, at Llangollen.—In connection with the Sixth Annual Flower Show. Open classes for Six 1-lb. Sections, Six Jars Extracted Honey, and Beeswax. Schedules from Frank Little, **Brook Bank,** Llangollen. **Entries close August 11.**

August 30, at Cartmel, Lancashire.—Honey Show in connection with the 32nd Annual Show of the Cartmel Agricultural Society. Three open classes for Comb and Extracted Honey (prizes, 15s., 10s., 5s., and 2s. 6d.), and Beeswax (prizes, 10s. and 5s.), along with silver and bronze medals of the Lancs B.K.A. Schedules from W. Cragg, Secretary, Cartmel, via Carnforth. **Entries close August 18.**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

NOVICE (Monkton, Ayrshire).—Dead Queen Cast Out.—The appearance of queen sent indicates "balling"; in fact one wing is almost bitten away. It is probably a case of queen being deposed by the bees themselves owing to the queen's waning powers. You should examine the combs to see if queen cells are formed, and, if so, there will be no need to re-queen the stock unless you wish to save time by purchasing a laying queen for introduction to the queenless colony.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul brood."

We urgently request that all letters sent with samples of suspected comb be put outside the box or tin containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.

In urgent cases (and where possible) we undertake to "wire" replies as to F.B. if six stamps are sent to cover cost of telegram. All letters should be addressed "Editors," not "Manager."

"CANDY" (Norwich).—Comb contains no trace of disease at all. In fact nothing worse than a couple of hundred or more of larvæ dead in their cells, which, if left in the hive to hatch out, would have soon been busy and happy in gathering honey for their owner. We only mention this to induce great care in cutting out healthy brood, which only needs close inspection to show its freedom from all the known symptoms of foul brood.

E. C. (Cornwall).—There is decided foul-brood in comb, and the disease seems to be developing rapidly; we therefore advise destruction of combs, frames, and loose contents of the hive by burning. But if, as stated, the "bees are strong and queen prolific," you should deal with them as directed on page 152 of "Guide Book."

A. E. R.—1. Foul brood is developing in comb; it seems only a recent outbreak judging by sample. 2. We should not use formalin while bees are storing honey in supers.

Editorial, Notices, &c.

HONEY SHOWS FOR 1904.

It is gratifying to find that the list of honey shows for the coming season bids fair to outnumber that of last year, therefore, with the present prospect of a good ingathering we may hope to see British honey giving plentiful evidence of its quality and suitability as a table luxury for rich and poor alike.

The entries for the "Royal" are satisfactory, showing an appreciable increase over those of last year, and as it is certain that the list of absentees through adverse weather will be very considerably smaller than in 1903, it only needs a good attendance of bee-keepers to make the honey section a full and complete succes.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "THE EDITORS of the 'British Bee Journal,' 10, *Buckingham-street, Strand, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 10, *Buckingham-street, Strand, London, W.C.*"

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[5536.] For over a week past, indeed ever since the Saturday before Whit-Sunday, we have had poor bee-weather in our district, wet and dull; Sunday, the 29th, was a sunny day, and the bees worked with a will, but next day it was again dull with drizzling rain and little doing in the apiary. There is a good breadth of bee-forage in bloom and more coming on, so we in Wessex are hopeful as of yore.

Honey Jars.—I was glad to see our Editors' foot-note to my last "Notes" on page 193. I received a sample of the new No. 6, sent out by Messrs. Abbott Bros., which reached me after my "Notes" were written; but when I came to compare the capacity of the No. 9 jar I had mentioned as being before me when I wrote for B.B.J. of May 19, and the new No. 6 with the improved vacuum cap, I find the latter will hold nearly 2 oz. more than the No. 9. With regard to my mention of the fumes of formalin in last "Notes" (page 193), Mr. J. M. Saunders writes me to say he is very hopeful that it will be proved that the fumes of formalin (or formaldehyde), if applied in a properly constructed fumigating-box, will penetrate or amalgamate with honey in the cells of the brood-combs. If such is the fact it will be most extraordinary, when we consider the density of honey!

Has "Condy's Fluid" ever been tried as a disinfectant for honey from foul-broody combs? If this fluid has such disinfecting power over water, one would expect that if a certain quantity was mixed with the contaminated honey, it would have the same effect on that as on other liquids if the honey was thinned-down suitably for feeding to the bees.

I would offer a word to novices in the craft:—If you are enlarging the brood-nest of established stocks by extra frames, always give full sheets of foundation; do not expect to get worker-size cells built if "starters" only are given. Bees almost invariably build drone-comb if room is given at this period of the year.

Number of Frames for Supering.—A query reaches me on this subject. I use ten as a rule, but have had a good return from colonies with nine frames only, but I prefer ten, eleven, or twelve, though if the front or back combs are largely composed of drone-cells I would take the comb out and reduce the frames to nine rather than leave the drones to mature. Weak stocks should be united before supering, or the season will be gone before they get up to supering strength. Two weak stocks joined together may gather some surplus, and with a young queen given later on may make a good colony for another season.—W. WOODLEY, Beedon, Newbury.

BEE-PEST OR FOUL BROOD.

[5537.] About twenty-five years ago I had a somewhat extensive apiary, and suffered from a strong attack of "bee-fever," but my venture was a great success. Unfortunately, I had to remove to another part of the country and the bees were got rid of. A few years later I commenced bee-keeping again, but this time was far from successful owing to the above-named disease. In order to get rid of it I adopted the plan usually recommended—viz., made artificial swarms and destroyed everything but the bees and the bare hives. Ultimately I destroyed everything—bees and hives as well—and two years later commenced with new stock in every particular, but, alas! the same fate (except that the hives were retained) followed them.

Four seasons ago I determined to commence again, and bought several swarms. These were placed in hives which a few weeks previously had been scalded and well washed with a strong solution of Little's Soluble Phenyle. When the hives got warmed by the natural heat of the bees the disinfectant proved too strong and the bees swarmed out and left them empty. However, I finally succeeded in retaining them and all went well.

In the autumn of 1902 I purchased three hives with bees of a gentleman close by. He assured me that the stocks were perfectly clean and healthy, and that they had been passed as such by the local "expert." I could not examine them closely as the supers were on, and I was only to have possession when these had been removed. A week or two after these bees had been placed in my apiary I discovered that one was slightly infected with foul-brood. I immediately burnt the three frames of comb containing the disease, and last season my hives seemed to be quite free of the complaint. But during the past week I find the disease has re-appeared in three colonies. Only a few combs are effected, and these not to any great extent. The bees are strong in numbers. Would it not be best to allow them to remain until after the honey season before removing the combs or making artificial swarms?

They are ready for supering. Can I spray the combs with anything to arrest the spread of disease; if so, what?

I have a double-hive, a "Wells' Twin," I think it is. Both stocks are ready for supering. Can you tell me how to proceed? Do I allow the both lots to work one super, but, of course, using excluders to prevent queens coming together? Name enclosed for reference. — DEVONIAN, May 27.

[Before giving supers use naphthaline in the ordinary way as a preventive, and let the bees do their best in honey-gathering till end of season; then examine combs, and if the disease has made any headway get the bees off combs and feed liberally till new combs are built. You might also with advantage add a driven lot of bees with young queen to each lot before feeding up for winter. In working hives on the "Wells" system the bees of both stocks work in a super open to all.—EDS.]

HELPING BEGINNERS.

AN APPRECIATION.

[5538] More than five years ago, when I started bee-keeping, on finding myself in difficulties, I received at your hands freely and willingly courteous advice, which helped to put me to rights. I have always remembered your kindly interest, and often now marvel at your perennial and painstaking interest in the troubles of beginners. Please accept my best thanks for all your help, and for what I consider the indispensable B.B.J., whose valuable hints and suggestions form, if not a royal, certainly the quickest road to success. With every good wish for a delightful season.—H. V. F., Dublin, May 16.

REVIEWS OF FOREIGN JOURNALS.

By "Nemo."

L'Apiculteur.—In a former number it was stated in an article translated from the Russian language by M. Jouhannaud, that on dissecting the stomachs of young swallows only drone bees were found. M. Seguin, in the current number, referring to this, states that a friend of his, wishing to verify this statement, found stings in the excreta of birds. The editor says that notwithstanding appearances, the two facts are not inconsistent, and, on the contrary, prove the wisdom of God in ordering all things. Swallows, in feeding their young, give them only drones, because the sting and poison-gland may be harmful to their delicate throats, and it is during the time of their rearing that drones are most abundant. Swallows, therefore, come to the assistance of the bee-keeper in keeping down the number of drones, and at other times the consumption of worker bees is not sufficiently great to justify bee-keepers waging war against them.

Praktischer Wegweiser fur Bienenzucht.—Four methods of recognising when royal cells arrive at maturity are given:—1. The apex is brownish, leather-coloured and transparent. 2. If held up to the sun, the queen is seen to move, and all its members can be easily distinguished. 3. If the cell is placed close to the ear the gnawing of the covering by the queen will be heard distinctly. 4. If the cell is felt gently with the fingers, the movement of the young queen is generally distinctly perceived. Much has been written for and against *Phacelia tanacetifolia* as a bee and forage plant, and in the same journal we read that the Province of Brandenburg undertook a series of experimental cultures with the object of determining the real value of this plant in agriculture. With the exception of two, all the other cultivators agree that this is a first-class nectar-yielding plant, and from 50 to 80 bees per square metre could be counted during dry weather or immediately after rain. The opinion of it as a forage plant is not anything like so favourable. Animals have to get used to it, and it must be given to them before the stalks get hard, therefore mown just when the first blossoms

are fading. The value of *Phacelia* is in its rapid growth, for if sown in stubble one obtains in the autumn abundant forage or a good green manure. It is not relished by cattle in a dry condition in the form of hay. This plant seems to flourish in any soil.

Le Rucher Belge.—M. Van Hay discusses wintering bees in cold districts. He found one of his colonies had died with an abundance of honey, the upper part of the frames being filled, but this honey was hard and solid. He says it is necessary to ventilate hives, but it is also necessary to have plenty of heat in winter if one lives in a cold and damp district. It is a great pity that division boards have been so generally discarded, for the brood-nest is often much too large. M. Van Hay has resumed the use of these boards to his advantage. In the autumn he recommends that all combs containing narrow strips of honey should be uncapped, and the frames hung on the outside of brood-nest so that the honey may be removed by the bees and placed in the centre. Close covering of the frames, a division-board to reduce brood-nest, and moderate ventilation at the bottom, will insure a sufficient temperature in the hive to keep the honey liquid.

In *L'Apiculteur* we read of a very striking instance of the value of lime in the soil in inducing a secretion of nectar. It has long been known that calcareous districts produce flowers rich in nectar, and an experiment carried out by a bee-keeper has furnished additional proof. He sowed a field with buckwheat, half of which received a good dressing of farm-yard manure, and the other half was dressed with lime. On the first not a bee was to be seen when the plants flowered, whereas on the second they were flying in thousands.

Bulletin de la Société Romande d'Apiculture is the title of a new monthly bee paper which has succeeded the *Revue Internationale*, lately given up by M. Ed. Bertrand. This journal is published by the Bee-keepers' Association, and is edited by M. Gubler, the president of the society and a regular contributor to the *Revue Internationale*. He is assisted by M. Ch. Bretagne, M. Farron, and other members. The subscription price to members is only 2 francs 10 centimes, and for other countries in the Postal Union 3 francs 60 centimes. The first four numbers are before us, and contain interesting articles, and we hope the journal will fill the void caused by the retirement of the *Revue Internationale*.

Bulletin de la Société Romande d'Apiculture.—We find Pastor Descoullayes makes a report on the insurance scheme in 1903. In the French-speaking cantons 264 bee-keepers insured 4,198 hives. These figures are small compared to the number of members, but it is a beginning of the trial, and it is thought a great many more will join in 1904. The cost of insurance is five centimes (one halfpenny) per hive per annum, and every bee-keeper is expected to make a correct return of the number of his hives so that he may be correctly assessed.

Queries and Replies.

[3431.] *Drone-Breeding Queen.*—I examined some hives for a "beginner" to-day, and in one found combs similar to enclosed, from which I cut the piece sent as a fair sample. I am rather suspicious of it, and should like you to kindly say what is wrong. The owner tells me he transferred the bees and combs to a clean hive some time ago. Perhaps he chilled the bees then. The queen appears to be old, and the eggs are deposited irregularly on sides of cells.—F. T., Birmingham, May 25.

REPLY.—There is no disease in comb, but queen is evidently old, and, being worn out, produces nothing but drones. There is just the possibility of the original parent queen having been "balled" and killed when the hive was examined in spring, and that the queen now in hive was raised before drones were flying. It is therefore for you to judge of this after inspecting the queen now heading the stock.

[3432.] *Treating Diseased Stocks.* — I am sending by same post a small piece of comb taken from a stock I was treating for foul brood. I had removed the bees from a frame-hive and put them into a skep on Monday night. Last night (Thursday) I shook them from the skep into a clean frame-hive, and after doing so I found in the skep three small pieces of comb, each having several cells containing some dark substance, same as piece sent. Two of the pieces were built with half worker and half drone cells. I therefore ask:—1. What is the cause of the dark cells and rather pink tint of the comb as built? 2. Do the drone cells point to queen being lost, though I am much mistaken if I did not see her run into the hive last night along with the other bees?—W. THOMPSON, Stratford-on-Avon, May 27.

REPLY.—The dark substance is simply fresh-gathered pollen. The slightly-tinted colour of new comb is nothing uncommon, the colour being attributable to the material from which the wax was secreted. 2. Not necessarily, though it will be well to examine and see if all is going on right in frame-hive.

[3433.] *Drones Cast Out in May.*—I have a hive of bees, which I observed yesterday had been casting out drones — several dozens of them—and as this is surely not a usual thing at this season, I take the liberty of asking your guidance as to the probable cause of this, or what can be done in the case. As I had been expecting the stock to swarm soon, your reply would oblige and be esteemed. I send name, etc., and sign—NOVICE, Bridge of Allan.

REPLY.—It is quite possible that the trouble is nothing more than the result of a few days' adverse weather and shortness of stores.

[3434.] *Transferring from Skeps to Frame Hives.*—I got the chance of a straw skep. Can I get it home, and fix the bees up in frame-hive with full sheets of foundation? It is only 300 yards away. I should like to have your advice, as I am only a young hand, and a subscriber for two years.—W. J. BROWN, Newport, Mon.

REPLY.—Your best plan will be to prepare the frame-hive as stated, and, when ready on its stand in your own garden, bring the skep of bees home after work has ceased for the day and set the skep on top-bars of frame-hive, as directed in "Guide Book," and allow the bees to transfer themselves.

[3435.] *Bees Superseding Queen.*—Would you kindly tell me if the enclosed dead queen is an old one or a young one? I found it helpless on the floor of one of my hives to-day. There is also a queen in the hive now, and I want to know if latter is the young one. I intended killing the old queen to-day, as I expected to have a young one hatched in a few days; but when I examined my hive to-day (Saturday) I found the young queen already out, and now I am anxious to know if I have a young or an old and worthless queen remaining in the stock. The other queen was going over the combs at a tremendous rate, which makes me think she must be the young one, otherwise I do not see the slightest difference in their appearance. I bought the old queen last year for a pure Carniolan. I send name, etc., and sign—ANXIOUS, Chester, May 28.

REPLY.—The dead bee sent is no doubt the old queen, but with regard to her being a "pure Carniolan," we should judge her to be a hybrid Ligurian.

[3436.] *Bee-keeping as a Healthful Occupation.*—I am intending to start bee-keeping next spring, and therefore am looking out for a suitable piece of ground. I should be much obliged if you would reply through your JOURNAL to say what district within twenty to thirty miles of London you consider the most favourable. My doctor advises me for health's sake to live on high, dry ground, away from water, and I think this would suit the bees also. Name, etc., sent for reference, but kindly reply to—G. M. K., London, W.

REPLY.—Our personal knowledge of the above requirements is hardly comprehensive enough to warrant us in naming the best locality. Perhaps some readers will send on their views if they can recommend a place.

[3437.] *Swarms and Foul Brood.* — A friend has offered me a swarm, but I hear that he has had some foul brood in his apiary. Shall I be safe in accepting the swarm? Would a swarm issue from a diseased colony affected with foul brood? I shall much appreciate a reply in your next number. I send name for reference, and sign—ARCHIBALD WIPSON, Orpington, May 25.

REPLY.—Presupposing that the swarm offered is a natural swarm and not an artificial or made swarm, we should have no hesitation whatever in accepting it. Diseased stocks are not prone to swarm naturally, and if a slightly affected colony was able to reach swarming condition, it is strong evidence of inherent vitality and vigour in the bees themselves as being able to resist disease.

[3438.] *Working with "Wells" Hives.*—I wish to work a "Wells" hive this season for extracting, and should be obliged if you will tell me:—1. How large should the holes in "Wells" dummy be? 2. Should there be any division between the two colonies in the shallow-frames? Name enclosed for reference.—J. R., Middlesex, May 10.

REPLY.—1. The size of "Wells" dummy is an important item in the management of Mr. Wells' hive. You had better read up the full description of it in a former issue of B.B.J., or get the pamphlet published by Mr. Wells on his system of working the hive in question. It may be had for a few coppers from the author, Mr. Geo. Wells, Aylesford, Kent. 2. No.

(*Queries continued on page* 216.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

Mr. Marrs, seen in his apiary illustrated on next page, is a thorough-going Scotch bee-man of the most useful type, and one who will do credit to the craft in all he undertakes. Having come into direct touch with him, and tested his qualifications, we can vouch for this, while for the rest,

the modest account of himself contained in the following "notes," written at our request, needs no addition. He says:—

"I first became interested in bees nineteen years ago, through a gardener friend whom I saw sulphuring a skep to get the honey. Some little time afterwards my friend gave me a skep of bees, and from that day I have never been without them. I heard of frame-hives soon after I started bee-keeping, but could find no one to give me any information at that time, until a gentleman, seeing me working with the bees, kindly gave me a book on bee-keeping the title of which I forget, but it supplied me with all the information required, and in putting my knowledge into practice, I purchased a frame-hive from Messrs. Abbott Brothers, as a pattern, and ever since that time I have made my own hives. I can well remember my first swarm which (although I had the assistance of a friend) took three hours to hive, and we thought we were very smart. I suffered dreadfully from stings for some years, and often thought I must give the bees up; but the hobby was so fascinating I persevered and now am quite inoculated, though I rarely get a sting now, except by accident. In my earlier days I found the production and sale of stocks and swarms the most profitable at first, but having supplied everybody around with bees I took to honey-production. The first sections I sold were worked on the top of a straw skep, and realised 1s. 6d. per lb., and for some few years afterwards I could average about 1s. per lb. for my honey-crop. My best 'take' from a single hive was 112 lb., my average in that same year being 86 lb. per hive. My apiary was located near Edinburgh at that time. As an exhibitor my first success was gained at the Highland Society's Show in Edinburgh in 1893, where I got second and third prizes for 2 lb. sections. I was also fairly successful at local honey shows. Six years ago I removed to Dumfriesshire, and since coming here have had one or two good honey harvests, but owing to the prevalence of foul brood in the district my stocks have never been in really good order for the last three years. They are, however, I am glad to say, very much stronger and healthier this year than they have been since the disease broke out. I hold the third-class experts' certificate of the B.B.K.A., and am hon. expert to South of Scotland B.K.A. I lecture in the bee-tent for the association when I have time, and deliver an occasional lecture during the winter months. Last year the Kirkcudbrightshire County Council gave a small grant to our Bee Association for technical instruction in bee-keeping, and I had the pleasure of doing part of the work. This was the first occasion, I think, of a County Council in Scotland giving a grant for bee expert work. The figure in photo is that of myself hiving a swarm. I may say that, except hiving swarms, most of my bee work is done before 7.30 a.m. or after 10 p.m."

MR. HENRY MARR'S APIARY, NEWTONAIRDS, DUMFRIES, N B.

(*Queries continued from page* 214).

[3439.] *Bees Casting Out Brood in May.*—One of my stocks of bees has recently been casting out a large quantity of full-grown worker-brood, in consequence of which I transferred them into a new hive. After I had examined the combs in order to account for what had happened, I found that three or four of the centre combs contained several rather large patches of full-grown larvæ, uncapped and dead, while some were capped and hatching at the sides in the same combs. I am certain it is not chilled brood, as I did not open the hive before the larvæ were being cast out. I had left off feeding, and there was very little food in the hive. I should be pleased if you can tell me the cause of this. Name sent for reference—T. S., Worthing, May 25.

REPLY.—It is difficult to diagnose and reply to the above case without having a sample of the dead brood for inspection. There seems no reason for some brood dying in "centre" of combs, while that on the outside of same comb is hatching out all right. We have had cases of brood dying in cells after reaching the pupa stage from overdosing with disinfectants, but in your case no mention is made of these, and in consequence we cannot account for the death of larvæ other than from lack of the warmth needed to complete the hatching. A sample of brood or some further particulars might help us in forming an opinion.

[3440.] *Dealing with Foul Brood.*—On examining my hives the other day, I found one badly affected with foul brood. I have five other stocks on same stand, which I intend to treat with naphthaline, as directed in "Guide Book." Would this have the effect of stopping the disease, supposing it is only a slight attack? I have some frames of combs removed from the affected colony in early spring to contract brood-nest, and they are placed in a box along with combs taken from other stocks. Would it be safe to use any of them in spreading brood-nest now?—E. D., Farndale, Yorks, May 19.

REPLY.—If, as stated, the stock in question was "found badly affected with foul brood" it cannot be safely regarded as "only a slight attack." For a stock of bees badly affected at this season drastic measures are best, and we should destroy by burning all combs and hive contents. If bees are in strong numbers and headed by a young queen they might be dealt with according to instructions in "Guide Book," otherwise they should also be destroyed.

[3441.] *Ripening Honey.*—Enclosed is a sample of honey extracted May 28. Will you kindly give your valued opinion—1. As to its consistency, colour, and flavour, also its probable source, and grade or quality? 2. Does unripe extracted honey materially improve in flavour, consistency, colour, or any other quality by being kept in a very warm temperature (80 deg. to 100 deg. Fahr.)? 3. Is unsealed extracted honey made equal in quality to sealed by this treatment? 4. How long of this ripening is desirable at, say, 100 deg.? 5. Would specimen sent be improved by keeping as suggested? It was nearly all sealed over when extracted. I shall keep the honey heated till B.B.J. of June 2, when I hope to see your reply.—HEDLEY V. FIELDING, Dublin, May 28.

REPLY.—1. Sample is rather thin owing to being extracted before properly ripened. The colour is rather dark, such as comes from fruit-bloom, from which source the sample has no doubt been gathered. It is rather poor in quality, having no characteristic flavour of honey at all; in fact, it might be sugar-syrup so far as flavour goes. 2. Ripening honey simply adds to its consistency and keeping qualities, but has no effect on flavour. 3. No doubt honey ripens best in the hive. 4. It takes several days to ripen thin honey. 5. Yes.

[3442.] *Making Artificial Swarms.*—Would you kindly say what would happen if I made an artificial swarm according to directions in "Guide Book," and if, on examining about ten days afterwards, I found three sealed queen-cells on the new combs? I send full name, etc., and sign—J. B., Sarum, May 25.

REPLY.—It all depends on what portion of the artificial swarm you examined and found the queen-cells in—*i.e.*, the queenless portion or that containing the present queen. If we are informed on this point we will reply next week.

Echoes from the Hives.

Charing, Kent, May 25.—In Mid-Kent May has, so far, been an ideal month, with the exception of a three-days' rain, when the cherry blossoms were out. The apples are now in full bloom, and if the produce is at all commensurate with the promise we shall have a record year in apples. All my stocks were supered, except one, by May 14, and the bees were soon busy in them. My first swarm issued on May 20. It is a swarm I can hardly explain, for it came from a not over-strong stock. Though strong enough to commence work in shallow frames given them May 14,

the super was by no means crowded. The day was unsuitable, being cool and gusty, though sunny. The swarm, too, was small and settled on the ground. I see Mr. Woodley speaks of feeding in spring as if he did not quite believe in it. I should like to see a discussion on the subject, because I am not sure it does good. A neighbour of mine has a stock which, without any feeding at all, is as strong as mine, which were steadily fed all through April and part of March. I thought I was proof against stings, but I had a sting the other day under the eye which proved a virulent one. At other times it merely makes a white spot. I cannot account for some stings being worse than others.—S. DARLINGTON.

Burton Pidsea, Hull, May 28.—Some of us in Holderness also had unusually heavy losses last winter, and can therefore thoroughly sympathise with our brethren in North Scotland. I myself tried to winter fifty stocks, but lost more than twenty-five per cent. I should perhaps have united a dozen lots, which were rather weak, with their neighbours in the autumn. Some bee-keepers have lost all theirs. The bees I took to the moors came out very badly; I think probably because very little of the honey got there was sealed properly. But, no doubt, the chief reason was the dull weather we had at the end of the season, which checked the breeding, so that many colonies went into winter quarters with too large a proportion of old bees. Generally at the end of May I have about a dozen stocks doubled, but this year I have only three, and the rest are rather backward. However, there are yet three weeks before the clover blooms, and I may be able to secure tenants from the south for some of the empty hives. I am, indeed, hoping this may catch the eye of the writer of "The Price of Honey" (B.B.J., December 10, 1903), who signed himself "Desunt Cætera, Lincs." I shall be happy to purchase half-a-dozen swarms from him at 8s. each (I suppose they will average between four and five pounds) if he can deliver them in Hull by the middle of June. He can also book as many more for my friends. If he has none to dispose of himself, I shall be obliged to him if he can send me the names and addresses of bee-keepers who are willing to supply on the above terms.—RICHARD M. LAMB.

Maltby, Rotherham, May 28.—I had a fine swarm on May 26, the first heard of in this district. Bees in all supers, and working well.—J. H. B.

Hopefield, Div. Malmesbury, Cape Town, South Africa, May, 1904.—I subscribe to the BEE JOURNAL. I get it from a Cape Town bookseller, and may ere long put a few queries through your paper. We have a grand piece of scrub (bush) country, averaging from three to eight or ten feet in height along the west coast of the Cape Colony from Malmesbury to Clanwilliam, second to none for production of wild honey.—W. J. H. W.

COMB OR EXTRACTED HONEY—WHICH?—I.

BY C. P. DADANT.

To the reader who wants his answer in two words, my reply will be short. My preferences are for producing extracted honey. But there are so many things to be considered in the decision of a preference for one or the other mode of bee-culture, that I wish to explain at length my reasons, so that I may not lead astray those who are still undecided. I will therefore deviate from my customary rule of writing short articles, and will occupy two or more articles with this subject.

I will begin by comparing conditions as they were when I began bee-culture, with present conditions. At that time, some thirty-five years ago, the honey- extractor had just been invented, and bee-culture was as yet in a very imperfect condition. The honey was produced in little boxes weighing from 5 lb. to 8 lb. each. The best looking boxes were made with only the top and bottom of wood, and four little posts at the corners to which four panes of glass were fastened. The regular Langstroth hive was supplied with six of these boxes, and they did not admit of tiering up. About 36 lb. of honey was as much as any colony was supposed to be able to store. The rougher hives had boxes with only one side of glass, but the careful bee-keepers would place guides of white comb glued to the inside top of such boxes, next to the glass, in order to secure a smooth-looking comb, straight and neat, for a better showing. Otherwise the bees might have built their combs diagonally, and the box, when filled, would not have presented such a fine appearance. These boxes had but one small hole for the bees to enter, and were slow to fill.

The first section-boxes that I can remember for the production of comb honey, were gotten up by Gen. Adair, of Kentucky, who made a super composed of sections 2 in. wide and fitting against each other. These sections were much larger than anything we have to-day, as they usually held about 3 lb. to 4 lb. of honey. Comb foundation was not yet in use, and in order to secure straight combs it was necessary to glue small bits of white comb from a previous season to the top of each section. But a great deal

of honey was sold in this shape, and at good prices. Mr. Harbison, and the other California bee-keepers, were the first to make a smaller section with a triangular top-bar, so as to secure straight combs without having to use guides. Then a little later A. I. Root suggested the making of a 1-lb. box for retailing, and also about that time began the making of foundation, and the present system was thus introduced to stay.

We have very quickly found out that the little-box system, with room for 36 lb. on the hive at one time, was inadequate. Although not located in the best of honey-districts, we discovered that when the honey was in the blossoms, a strong colony could use more space than was generally thought ample. We adopted the Adair super at once. This, of course, enabled us to give the bees all the room they wanted, but several things militated against the production of comb honey as compared with extracted honey in our experience. We noticed that the bees swarmed a great deal more when they had to build their combs than when combs already built were furnished to them in ample quantities.

It is a now positively accepted fact that a strong colony of bees may harvest as much as 20 lb. of honey in a single day. If room is not found for this honey, some of the bees have to remain loaded until room is found; and are therefore kept from going to the field. Though it is a fact that this honey is very watery, and evaporates perhaps as much as 25 per cent. within a couple of days, yet the bees find themselves crowded for room unless many empty combs are within their reach. They then have nothing to do but hang in clusters in the empty space till the honey which is contained in their honey-sac is digested and changed into wax. This is an inducement to swarm, and that is why so many colonies swarm with space still in their reach.

There are also other causes of swarming, even when there is empty comb in the hive, but this question has nothing to do with the present subject, as it is an exceptional occurrence.

What I have stated above shows why colonies producing comb honey will swarm much more readily than those producing extracted honey. In the first case, they must be crowded for room before they will build combs, and will then crowd themselves and the queen both. In the second case, if the extracting method is properly followed they will have empty combs at their disposal at all times, and never need to crowd themselves or the queen. It is true that bees produce beeswax, willy-nilly, during a good season, but the quantity thus produced is never great, and is needed to repair the combs that are given them to add to their depth, and to seal them when the honey is thought by them ripe enough for sealing. In a hive provided with a full stock of extracting-combs, there are always some empty combs, some combs partly full, and some sealed combs in one or the other of the supers.

I said just now that the bees produce wax, whether they will it or not, and this is confirmed by the experience of scientists who have discovered wax-scales formed on bees that were caught in the harvest-field. But the rapid production takes place only when they hang in numerous festoons in the empty portion of a hive. That is why a natural swarm builds so readily, nearly all the bees having become wax-makers. Their stomachs are full, and in order to empty their sacs they must first have the structure in which to deposit the honey.

So the bees that produce comb honey swarm much more readily than those that are supplied with empty combs from previous seasons, that have been emptied by the extractor.

In a large apiary, when natural swarms are not desired, when, in fact, we are wishing to devote all the energy of the bees and of the apiarist to the ultimate aim of bee-keeping—the production of the best of sweets—it becomes natural to want to reduce swarming to its minimum, and that is one of the reasons why we have adopted the production of extracted honey.

But I have several other reasons which I will give in another number.—*American Bee Journal.*

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 7 to 10, at Guildford. — Royal Counties Agricultural Society's Show. Bees, Appliances, and Honey Department, under the management of the Surrey Bee-keepers' Association. Twenty-one classes. Schedules from F. B. White, Hon. Secretary, Marden House, Redhill, Surrey. **Entries closed.**

June 21 to 25, at Park Royal, London.—Royal Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A. Increased prizes for B.K.A. Associations as arranged in divisions or groups of counties. Schedules from Edwin H. Young, Secretary, 12, Hanover-square, W. **Entries closed.**

July 14 and 15, at Grimsby.—Show of Honey, Hives, and Bee Appliances in connection with the Lincolnshire Agricultural Society. Bee Department under the management of the Lincs. B.K.A. Fourteen classes. Liberal money prizes and silver medals. Schedules from R. Godson, Hon. Sec. Lincs. B.K.A., Tothill, Alford, Lincs. **Entries close June 14.**

July 27, at Henbury, near Bristol.—Annual Show of the Henbury District Bee-keepers' Association

in connection with the Horticultural Society's Exhibition. Several open classes with good prizes (two classes with free entry). Schedules from the Hon. Sec., J. Atkin Waller, Pen Park, Westbury-on-Trym, near Bristol. **Entries close July 22.**

July 27 and 28, at Cardiff.—Glamorgan B.K.A. Show of Honey and Appliances in connection with the Cardiff and County Horticultural Society's Exhibition in the Sophia Gardens, Cardiff. Seven open classes for Sections, Extracted Honey, Beeswax, and Honey-comb Designs, also for Hives, Collections of Appliances, and Observatory Hives. Schedules from Wm. Richards, Hon. Sec., Glam. B.K.A., Gabalfa, Cardiff. **Entries close July 21.**

July 29, 30, and August 1 and 2, at Southport.—Annual Show of the Royal Lancashire Agricultural Society. Liberal money-prizes are offered for honey along with silver and bronze medals of the B.K.A. and also of the Society. Open classes for Honey-Trophy, Sections, Extracted Honey, Beeswax, Honey-Confectionery, Bee Flowers, Instructive Exhibits in Bee-Culture, &c. Schedules from Edward Bohane, Secretary, Miller-arcade, Preston. **Entries close June 29.**

August 1 (Bank Holiday), Windsor District Berks, B.K.A.—Annual Show of Honey and Bee-Appliances in conjunction with the Clewer Horticultural Society, in the grounds of Clewer Manor (by permission of E. B. Foster, Esq., J.P., C.C.). Open classes for Observatory Hive, Twelve 1-lb. Sections, and Twelve 1-lb. Jars Extracted Honey. Also classes for Berks only, and for Windsor District only. Schedules from W. S. Darby, Hon. Sec., Consort Villas, Clewer. **Entries close July 23.**

August 4, at Kingsthorpe, Northants.—Honey Show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar of honey. (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schednles from R. Hefford, Hon. Sec., Kingsthorpe, Northampton. **Entries close August 1.**

August 10, at Wye.—East Kent Honey Show. Twelve classes for Honey and Bee Products. Seven open classes with liberal prizes. Practical Demonstrations in Bee Tent. Schedules ready shortly. John Tippen, Secretary, Wye, Ashford, Kent.

August 24, at Fleetwood.—Honey Show in connection with Fleetwood Floral and Horticultural Society. Open classes for Six 1-lb. Sections. Six 1-lb. Jars Light Extracted Honey, and Six 1-lb. Jars Dark Extracted Honey. Schedules from Edward Cook, Hon. Sec., Rossall Grange Farm, Fleetwood. **Entries close August 14.**

August 24, at Sandbach.—Honey Department of the Cheshire Agricultural Society's Show, under the management of the Cheshire B.K.A. Open classes for Hives, Sections, and Extracted Honey. Substantial prizes. Bee Lectures and Demonstrations on the show-ground. Schedules from T. A. Beckett, St. Werburgh's Chambers, Chester. **Entries close August 3 (at double fees August 10).**

August 24 and 25, at Leamington.—Annual Show of the Warwickshire B.K.A. in connection with that of the Warwickshire Agricultural Society. Schedules from James Noble Bower, Hon. Sec., Warwickshire B.K.A., Knowle.

August 25, at Llangollen.—In connection with the Sixth Annual Flower Show. Open classes for Six 1-lb. Sections, Six Jars Extracted Honey, and Beeswax. Schedules from Frank Little, **Brook Bank**, Llangollen. **Entries close August 11.**

August 30, at Cartmel, Lancashire.—Honey show in connection with the 32nd Annual Show of the Cartmel Agricultural Society. Three open classes for Comb and Extracted Honey (prizes, 15s., 10s., 5s., and 2s. 6d.), and Beeswax (prizes, 10s. and 5s.), along with silver and bronze medals of the Lancs B.K.A. Schedules from W. Cragg, Secretary, Cartmel, viâ Carnforth. **Entries close August 18.**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

CÆSAREA (Jersey). — Bee-keeping Disappointments.—Our correspondent's queries and replies to same would occupy far too much space for insertion in this column. Besides, it is mere waste of space to detail the instructions and advice of the bee-keeper who declared that "he knew more about bees than any one else in the world." We therefore omit the said instructions as to the good things that would surely happen if you "did as you were told," along with your own account of how the results turned out exactly opposite to what they should have done. It seems, however, that you now possess the "Bee-keepers' Guide Book," in which will be found full directions for carrying out every single operation mentioned in the letter before us. The book tells in simple words what to do and how to do it, and when the reader fails in carrying out the various items of bee-work detailed the fault lies not in the book but with the operator. It must be borne in mind that "bees do nothing invariably"; also that they cannot fill supers in a season of honey famine. We are most willing to render help where we can, but it is idle to talk about being led astray by books if the reader entirely fails to grasp the meaning of statements written as plain as words can make them. Where so many have succeeded there must be some valid reason for failure in the few, but some amount of aptitude is *asine quâ non* in all that pertains to bee-keeping. And in no instance does the book named go beyond the most moderate estimate of what is possible with the exercise of ordinary intelligence.

B. C. O. (Birmingham).—Bee Plants.—The plant sent is commonly known as crimson clover (*Trifolium incarnatum*). It yields honey, but of not very good quality, being rather rank or coarse in flavour and dark in colour.

F. E. R. (Ruabon, N. Wales).—Bee Nomenclature. — Bees sent do not appear either "smaller in size or of redder colour" than the ordinary brown bee of this country with a very slight trace of Italian blood. This is all the difference we can detect, nor have we ever heard of a strain known as "Welsh bees."

PERPLEXED (Putney, S.W.).—Width for Hive Entrances.—There is no fixed width for hive entrances. In very warm weather the full width across the hive front may be allowed with advantage, but when nights are very cold it is beneficial to close doorways to half the daytime width. With very strong stocks no harm in shape of "chilled brood" will follow the full-width entrance day and night, so there is no need to reduce entrances at night in the warm summer-time.

G. H. DAVIS (Kent).—Bee Nomenclature.—The bee sent belongs to the genus Bombus, or bumble-bee. It is a female; species, *Sylvarias*.

T. G. BROWN (Corsham).—Queen-Rearing on "Swarthmore" Plan.—1 and 2. Reference to our advertisement pages in this issue will supply the information asked for. 3. Depriving a stock of its queen at this season will certainly start the bees queen-rearing on their own account to replace their lost mother-bee; but this simple method of queen-rearing is quite different from the "Swarthmore" system, which, though based on scientific lines, is intended to raise queens in large numbers and of the particular strain desired for commercial purposes.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul brood."

We urgently request that all letters sent with samples of suspected comb be put outside *the box or tin containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.*

In urgent cases (and where possible) we undertake to "wire" replies as to F B if six stamps are sent to cover cost of telegram. All letters should be addressed "Editors," not "Manager."

F. T. P. (Hoylake).—There is no disease in sample, and, judging from appearances, and the entire absence of food in comb, the dead brood has been chilled in consequence of the bees having ceased to cover it, and so maintain the necessary warmth for ensuring its hatching out.

LEX (Leicestershire). — Sample shows a bad case of foul brood, which will require drastic treatment for the sake of healthy colonies near by.

J. S. (Edgware).—Foul brood is rapidly developing in the unsealed larvæ, and, as two cells in sample show the disease to be of old standing, it is useless to waste time in attempting to cure. We should therefore burn the lot!

J. W. (Lincs).—There is unmistakable foul brood in comb, but it does not seem a bad case, and, as bees are reported fairly strong with a good young queen, it is a hopeful case for treatment as directed in "Guide Book" for mild cases.

Special Prepaid Advertisements.

Twelve words and under; Sixpence; for every additional Three words or under, One Penny

SPECIAL NOTICE.—Orders for three or more consecutive announcements in above are inserted in our monthly, the "Bee-keepers' Record," free of charge.

Trade advertisements of Hive Manufacturers and Dealers in Bee-goods, not available for "Prepaid" column, are inserted immediately below "Prepaid" at a minimum charge of 2s. per half-inch space, or 3s. 6d. per inch; orders for "repeat" or continuous advertisements having free insertion in "Record" as above.

Advertisements for current issue must be received by first post on Tuesday.

SELL CHEAP, strong healthy STOCK, with Bar-Frame Hive, complete; also, Double Hive, complete, Guinea Extractor, Honey Ripener. Good condition. HOPWOOD, Charlesworth-terrace, Clitheroe. B 20

JUNE SWARMS. Bees, in body boxes containing 10 frames, each frame wired and fitted with half-sheets foundation. Printed instructions sent with every swarm as to transmitting to frame-hive. Preference cash orders. THOMPSON, Apiary House, Gowdall Snaith, Yorkshire (empties returnable). B 19

NATURAL JUNE SWARMS, from selected honey-gatherers. Hardy and prolific. 12s. 6d. each. Packages to be returned. Guaranteed healthy and safe arrival. Larger Swarms at proportionate rates. C. WHITING, Valley Apiaries, Hundon, Clare, Suffolk.

FIVE STOCKS of BEES, in Standard-Frame Boxes, FOR SALE. 15s. each. Also Four-Cage Geared EXTRACTOR, with Two Honey-Knives, 15s. W. TOOGOOD, St. Ives, Ringwood. B 11

WANTED, TEN 4-lb. SWARMS, early June. Cash. FORD, Brentford, Chelsey, Berks. B 7

FOR SALE, NATURAL SWARMS. Also heavy STOCKS. LINSTEAD, North Lopham, Thetford. B 6

PROLIFIC QUEENS. Imported Italians, 6s. 6d. Home-raised from imported mothers, Carniolans, 5s. 6d.; Italians, 4s. 6d.; British, 3s. 6d. Nuclei headed by any variety Queen. Write for requirements, E. WOODHAM, Clavering, Newport, Essex. B 5

WANTED, strong healthy STOCK or SWARM. Exchange two pairs Prize Black Tumblers. All guaranteed winners. Prize cards sent. Value 30s. HOBLYN, St. Colomb, Walton-on-Thames. B 2

PRIME NATURAL JUNE SWARMS. 11s. each, carriage paid. LOYAL SAIGEMAN, Hillside Apiary, Fittleworth. A 99

WANTED, 200 SWARMS, 2s. lb.; STOCKS, 8s. DAWKINS, Sutton Coldfield. B 8

WANTED, TWO SWARMS or STOCKS. Within few miles. B., Derby Lodge, Penge. B 15

100 CLEAN, Healthy, BUILT-OUT SHALLOW FRAMES. 7s. doz. WITHYCOMBE, Builder, Bridgwater.

SECTION HONEYCOMB WANTED. Best quality. Any quantity. T. SMITH & Co., 17, Cambridge-street, Hyde Park London, W. B 10

ITALIANS, Simmins' "White Star," Carniolans, English, and Doolittle's Italians, Swarms, Stocks. Particulars, HORTON, Flixton, Manchester. B 17

QUEEN-MATING BOXES, as described by Mr. Hooker in last week's *B.B.J.*, imported direct from America 1s. 6d. and 2s. each, post free. GEARY, Barwell, Hinckley. B 14

FERTILE QUEENS, 4s. 6d. FOUR FRAME STOCKS, 15s. Queens and Stocks always on hand. FRANK REED, Portslade, Sussex. A 71

STRONG NATURAL SWARMS, 1903 Queen, 12s. 6d., 13s. 6d.; second ditto, 1904 Queen, 9s. 6d. Three Frames, Brood and Bees, 1904 Fertile Queen, 12s. 6d. All guaranteed healthy, Guinea Extractor, perfect condition, 14s. 6d. Honey Press, 4s. 6d. W. WOODS, Normanby, Guildford. B 13

WANTED, WORK amongst Bees. North preferred. Competent to manage hundred stocks in Flower or Heather district. Twenty odd years' experience in large Apiary. Fair amateur Joiner. Expert, 32, Ridley-place, Newcastle-on-Tyne. B 9

Editorial, Notices, &c.

SHROPSHIRE B.K.A.

ANNUAL MEETING.

The annual meeting of the Shropshire Bee-keepers' Association was held in the Mayor's Court, Shrewsbury, on Saturday, May 21, Mr. Rog King, Chairman of Committee, presiding over a fairly large attendance. The hon. treasurer, Miss. M. E. Eyton, presented the balance-sheet for 1903, which showed a deficiency of £4 14s. 4d., and the hope was expressed that, as the association is doing such good work among the bee-keepers of the county, many new members may be induced to join, and thereby assist in freeing the association from debt, and also help to widen its sphere of usefulness. A hearty vote of thanks was passed to the Duchess of Sutherland for presiding during 1903, and a resolution was carried, asking her Grace to honour the association by becoming president for this year. Votes of thanks were also passed to the Shropshire Horticultural Society and other donors of prizes, and to the past officers. Miss Eyton was again unanimously elected hon. treasurer, Mr. Roff King was re-appointed chairman, and Mr. S. Cartwright, of Shawbury, hon. secretary. A strong working committee was also elected. It was agreed to hold the annual exhibition of honey and appliances in "The Quarry," Shrewsbury, in connection with the Horticultural Show and Great Floral Fête in August.

BRISTOL B.K.A.

ANNUAL MEETING.

The annual meeting of the above association was held in Bristol on May 28. Mr. S. Jordan occupied the chair.

Mr. James Brown (the secretary) read the fifteenth annual report for the year ended December 31, 1903, which stated that the number of members remained very much about the same, but the accounts showed a much greater turnover, chiefly owing to the generosity of the Bath and West of England Agricultural Society and the Gloucester County Council, who contributed liberally towards the expenses incurred in giving lectures each day at the Bath and West Show. The annual show was held in connection with the Chew Magna Horticultural Society, and the number of entries was well up to the average, as was the quality. Silver medals were gained by Mr. G. W. Kirby, Mr. J. Coates, Mrs. Exon, and Mr. M. A. Exon; bronze medals by Mr. G. W. Kirby, Mr. A. H. Lyons, Mr. S. Gibbs, and Mrs. Waller. The insurance scheme was taken advantage of by a good number, but no claims had been sent in from the district. The difficulty has again been experienced of getting experts to call upon all the members.

The report having been received and adopted, Mr. C. Harris referred to the excellent field day the association had, through the kindness of Lady Smyth and Miss Dawe, at Long Ashton in 1902, and inquired whether it would not be possible to arrange another field day for the coming summer.

A vote of thanks to Messrs. Brewer and Jolly for their services as judges at the honey show was carried unanimously.

The question of asking the County Councils to take over the expert work was considered.

The Secretary stated that as regards the Somerset County Council its Education Committee could not take over the work until the experimental farm was given up, which would then liberate an amount of money that was at present tied up.

The Secretary of the Cumberland Bee-keepers' Association sent the draft of a Bill to be introduced into Parliament for the prevention of bee pest.

A member said that the best way to achieve this was for one member to present half-a-dozen healthy stocks of bees to the National Fruit and Cider Institute at Long Ashton, and that a foul broody stock should be in the neighbourhood, and when the disease spread, as it would, and the Board of Agriculture lost its bees, it might then schedule foul brood as the greatest curse of bee-keeping.

Mrs. Brown having distributed the prizes, the following were added to the Council:—Messrs. Bothroyd, J. Charlton, Jones (Weston-super-Mare), J. Coates (Twerton-on-Avon), and Perham (Flax Bourton).

It was resolved to hold the honey show at Bath.

BUCKINGHAMSHIRE B.K.A.

The above association, which was only inaugurated during the present year, has made a very successful start, having already arranged a thirteen weeks' expert's tour throughout the county. Mr. Edwards, of Shrubb's Hill, has been appointed to undertake this work; and, it being the first season of the association's formation, the expert will, as far as pos-

sible, visit non-members as well as members during his tour.

A county honey-label, for the use of members only, is also being prepared, and arrangements have been made to assist members in disposing of their produce. Those having honey to sell should communicate with the hon. secretary, when full instructions as to mode of packing, etc., for market will be forwarded. The association hopes next year to send a bee-paper monthly to each member.

It is pointed out that the expenditure during this, the inaugural season's operations will of necessity be heavy, and likely to exceed the income unless bee-keepers throughout the county become members and make their subscriptions as liberal as possible for the current year.

Lord Carrington has consented to act as president, and the hon. secretary (Mr. Ernest Oetzmann, Lyndhurst, Slough) will forward particulars of membership to applicants.

DERBYSHIRE B.K.A.

A special meeting of the Derbyshire B.K.A. was held at the Town Hall, Derby, on Saturday, May 28, at 2.30 p.m., to consider the draft of the proposed Bill for the Suppression of Foul Brood. Present:—R. Giles, Esq. (in the chair), Messrs. W. M. Bennett, G. Pallett, G. Allen, S. Powlson, E. Swain, and the Hon. Secretary. Resolved to grant financial support to the Cumberland Bee-keepers' Association towards the expenses incurred in drafting, etc., proposed Bill.

The general impression of the meeting was that the British Bee-keepers' Association, as parent society, was the one who ought to move in the matter, and not to leave it to the affiliated associations.—R. H. Coltman, Hon. Sec.

[We quite agree with the general impression that the B.B.K.A. is the proper body to move in the matter of legislation, and if there is a desire by the affiliated associations that the question should be again taken up, they should make their wishes known to the Council. So far as we are aware, however, only one association (the Cumberland) has signified any desire for foul brood legislation. The county associations are fully represented on the Council of the B.B.K.A., and if their representatives are unable to attend the meeting, the proper course would be to instruct their secretaries to make their wishes known to the B.B.K.A. It is not surprising that the Council hesitate in taking this matter up where so little desire is evinced on the part of its affiliated associations of co-operating with the parent body.—Eds.]

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "*The Editors of the 'British Bee Journal,' 10, *Buckingham-street, Strand, London, W.C." All business communications relating to advertisements, &c., must be addressed to "*The Manager, 'British Bee Journal' *Office, 10, Buckingham-street, Strand, London, W.C."*

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

COMMENTS AND CRITICISMS.

[5539.] You lately gently, but firmly, reproved an old beeman who expressed incredulity in regard to some large takes of honey last season. How would he view the following? In Argentina, average takes of 330 to 550 lb. per hive are common. One American produced 112,000 lb. surplus last year, 22,000 lb. of it being comb honey. Another apiarist has 700 colonies in one location in a single bee yard. One State can turn out 8,000,000 lb. of honey. Several individual bee-keepers possess over 3,000 stocks. One single bee-association numbers over 8,000 members. Verily, there are many things in this world that go beyond the scope of our "poor philosophy."

Prodigious!—If the story told in 5515 had not been recorded by a beeman of repute, or if it had come from across the herring pond, I would at once have set it down as a "yarn." So many strange incidents take place when dealing with bees, however, that I will not question the writer's veracity; but I feel confident I am safe in saying that he has established a record in hiving runaway swarms. That three of these should reach his apiary in the short space of time recorded, and take up their quarters in "prepared" hives, is nothing short of marvellous. What legerdemain does he possess, and can he give us a recipe for thus preparing hives to lure strange bees? Alas, no! for I notice he says "nothing was done to the hives," whereat I am much disappointed. An ancient writer (Hartlib) gives a recipe which he certifies "will much increase the number of your bees, multiplying them greatly, and entice other bees to come and stay!" I at first fancied Mr. Ross had something in this line up his sleeve. After giving the matter a two months' deliberate consideration, I stickle at the statement that scouting is ever carried on to such an extent as would disorganise a considerable apiary to

the degree recorded on page 171, at an early hour of the day, too; while I can scarcely credit that scouts would thus attack strong stocks, and, further, fail to understand why they apparently immediately forsook these on the waving of the magician's wand over the empty hives. A little elucidation on these three points would be at least interesting to the fraternity.

A Twelve-Pound Swarm.—Here is another point I am inclined to look on as a mystery! A man of practical experience [5466] "calculates on there being 100,000 bees in a fair stock," and (calculation again) 60,000 in a swarm, and "estimates" they would weigh 12 lb. I am shy of pitting my own practical experience against my Bucks friend, though, *en passant*, I may say it does not agree with his in any of the three particulars—so I fall back upon higher authority. Editor Root lately expressed the opinion that a nine-pound swarm is the biggest we shall ever have. A correspondent in *Gleanings* says (curiously coincident as to dates), that he had a 12-lb. swarm (another *calculation*, however), to which the editor appended a note implying, if not directly expressing, incredulity. "Perhaps we can break the record again. Who will beat this?'—followed by a dead silence! My second authority is more ancient, but also more emphatic. Huish, writing about 100 years ago, gave it as his opinion that swarms of 5 lb. to 6 lb. were the best and most profitable, and I am not certain but I would even now subscribe to that doctrine. Some in his day boasted of 8 lb. swarms, "some say even 12 lb.," and he naively adds, "but I would not put my name to such a story." If Mr. Root did not repeat these words, he seems to have said them inwardly! Now I am not to be understood as saying that a cluster of bees may not have scaled even the greater weight here recorded; but in such a case I would like to know something of its antecedents, and be able to investigate its parentage and subsequent history.

Inefficient Packing of Bees.—Already this season I learn of claims being made. It is worse than folly to do this when the claimant cannot conscientiously certify that the packing was fully efficient, as it is on this point the matter mainly hinges. The man who despatches live bees in an unsuitable receptacle deserves no commiseration when he loses them, but, rather, reprobation. The attention of the Society for Prevention of Cruelty to Animals should be drawn to any extreme case of this kind. Let me specially impress on all receiving swarms not on any account to pay money for *dead bees*. Note advertisers who guarantee safe arrival. Loss of bees in transit is a more frequent occurrence than beemen are aware, as so many prefer to grin and bear the loss than enter on a lawsuit. The railway company invariably deny liability, so that the onus of proof as to fault or negligence lies with the consignor, or too frequently the consignee. When anything like conclusive evidence can be produced that the loss is due to fault on the part of the carriers, my advice is: Pursue your claim to a conclusion and the company will yield. I know of two stationmasters who got full compensation last year by simply pegging away until their claims were allowed.

Queen Rearing.—Something like a revolution has lately been taking place in the mode of procedure followed in this important branch of apiculture. Visitors to the "Royal" can be initiated into the mysteries. I trust our Editors will then give us the fruits of their observation, and shed light on the subject in a way which will be to the benefit of the craft. If the operation proves a full success in this country cheaper queens can be had, and this must be an all-round advantage. At present the price asked for many advertised is prohibitively high.—D. M. M., Banff.

THE "WELLS" HIVE.

[5540.] As the result of my experiments with the double hive, I am of opinion that it possesses a very great advantage over single hives, because, owing to the warmth of two stocks, even weak colonies build up with extreme rapidity, and are very far ahead of the best single ones early in the season.

I find it is quite unnecessary and useless to perforate the partition dummy. The first "Wells" hive that I possessed was one I made myself. It had a fixed partition perforated with the usual holes, which the bees sealed up completely. The entrances were at the opposite ends. I found that under such conditions I could at any season of the year turn the hive right round so that the bees of A went into the hive of B and *vice versa*, without the slightest tendency to fight on the part of the stocks. I think that it makes very little difference whether the bees are allowed to mingle in the supers or not. I sometimes allow them to do so, and sometimes work each super independently, and am of opinion that either plan will answer almost equally well.

It is alleged that bees in "Wells" hives are more liable to become queenless in winter than in others. I do not think so. I lost two colonies myself this year out of twelve in these hives, and could not account for it until yesterday, when I discovered that the sides of each of these hives had bulged slightly outwards in the middle, leaving a free passage for the bees between the end of the "Wells" dummy and the side, and of

course under such circumstances the loss of one of the queens was almost sure to follow.

I may state that the loss occurred in one case after I had removed the dummy for the annual cleaning of the hive. Propolis which formerly filled the space between dummy end and side of hive was thus removed and left the free passage way to my loss.

If attention be given to this one point of making a secure division between the two colonies I am sure that the proportion of losses in double hives is no greater, but probably less than in single hives.

Double hives have only one drawback, and that is the extra weight, which requires an assistant if we wish to lift them *en masse*, but this is not often necessary.

Foul Brood.—Two bee-keepers of my acquaintance had foul brood very badly last year. They sprayed the affected combs with solution of Izal, as recommended by Mr. Simmins, and they inform me that a perfect cure has been effected without destroying any comb but the very worst in each hive. This year they are free from the disease.

Bee-keepers' Associations. Would it not be an excellent plan if our bee-keepers' associations had experimental apiaries, where all the various "cures" for foul brood could have a scientific testing? I am quite sure that voluntary effort has not yet had a fair trial, and that some go-ahead policy in this matter should be inaugurated by the associations which are mostly sleepy and of little practical use. I refer to no one association in particular. As regards foul brood, an expert could call in a friendly way on any bee-keepers troubled with the pest and give his assistance in clearing it out, whether said bee-keeper belonged to the association or not. I think that compulsory legal powers are far from desirable. The associations mostly devote their energies to lecturing on the advantages of bee-keeping, and this plan may get new recruits, but are many of them worth getting? Some find that there are two sides to bee-keeping, and that it is "not all honey," and get careless and neglect their bees, and as a result there is evil all round. Experienced bee-keepers who know their work do not get any benefit from all the lectures, and have, therefore, no personal inducement to join an association. What we practical bee-keepers want is an association that will combat foul brood, make practical experiments, advertise the virtues of honey in Press articles, and keep the price at as high a figure as fair supply and demand will allow. We do not want a lot of bee-keepers who will consider that they are doing well at threepence per pound for their honey. If the price ever come to that in a fair way we must put up with it, but if the bee-keepers' associations are to do any good, that day may be deferred for some time. We want practical common-sense, business-like associations. Bee-keeping is a business with many, and business principles must be adopted by the associations.

I recently purchased a pound of foreign honey, retailed in a glass pot at sixpence per pound. It was not worth twopence a pound. We need not fear foreign competition so long as our public are educated up to discriminate in flavour and quality. I would personally pay 1s. for good English honey rather than twopence for such as I tasted from abroad.—W. J. FARMER, Truro, June 4.

OBSERVATORY HIVES.

[5541.] I regret the correspondence on judging at shows, raised by Colonel Walker, has not brought more light on every branch of the subject. The honey, wax, and other classes have received good attention, but I was somewhat disappointed in not seeing some discussion on observatory hives for exhibition. Surely Colonel Walker has something useful to say on this class, and I for one would like to have his ideas as to what a good hive of this sort should be like.

Some judges think the queen of first importance, and appear only to consider her appearance, size, etc. Others must have a big show of brood, even at late shows. Again, with some, every other qualification must take a back place for new combs or new frames, even though the general arrangements are wretchedly bad, and bees clustering so that brood and queen are invisible, and the whole thing is more like a glazed swarm-box. I have seen observatory hives stocked without a particle of food or brood, the ventilation being so bad that hundreds of bees were suffocated. These faults are really sufficient to disqualify, but to see an otherwise good exhibit passed by perhaps simply because the combs or the frames have had a bit of wear is rather disheartening. My idea of a good hive would be one with proper convenience for ventilation and flight, constructed with proper spaces all round; bees strong and healthy and not too crowded; combs straight and not too old; brood and food in fair proportion, according to the season of the year; good-sized, smart-looking queen; no crushed combs; and the hive to be really useful from an educational point of view.

Perhaps some of our judges will not care to give their views, but if Colonel Walker will kindly add a few notes to supplement his excellent paper, others may be induced to follow where more light is required.—H. HILL, Ockbrook, Derby, June 4.

HOMES OF THE HONEY BEE.

[5542.] I much regret that in sending description of my apiary I omitted to say how very much I have been indebted to your "Guide Book" and bee papers during the years I have been a bee-keeper. I have used the "Guide Book" for sixteen years, and one or other of your bee papers for the same time.

The success I have attained in bee-keeping is due to the instructions contained in these publications. I wrote my notes very hurriedly just before leaving home in April, and that is how I omitted paying this tribute to your works on bee-keeping.

If you could see your way to making this acknowledgment in your next issue I should be glad.

Where can I get the article on "Bee-keeping as a Physical Exercise," which I think is published in pamphlet form?

Bees are in better condition in this district just now than I have seen them for some years, and there is less foul brood, I am glad to say.—HENRY MARRS, Dumfriesshire, June 3.

[We do not know where the pamphlet alluded to is to be procured. Perhaps some of our readers can inform us.—EDS.]

PROLIFIC QUEEN.

[5543.] Thinking you and your many readers of the B.B.J. would be interested with the facts in reference to a stock of bees and its queen I have in my apiary, I am sending you the following:—I purchased a skep of bees at a sale in November, 1903, and placed a two-pound cake of candy over the feed-hole in February of this year. On May 5 the bees were strong and the combs full of brood, so I decided to drive them. The queen was placed in a frame-hive on seven combs, which had been affected with foul brood. These had been disinfected with corrosive sublimate 1 in 1,000 as an experiment. The skep was then put over the frames until all the brood had hatched out. On May 26 I drove all bees from the skep and found plenty of sealed brood in the hive below. What I wish particularly to notice is that on the same day (May 26) I placed a standard frame with a full sheet of weed-foundation in the centre of brood-nest. It was examined in five days, and the comb was found to be fully drawn out and full of larvæ, which looked as if the eggs had been deposited at least three days. I placed another full sheet of foundation between two combs of brood and well covered with bees. After two days the last comb put in was examined when putting in the feed-bottle, and this was found drawn out and full of eggs, so I decided to insert another full sheet of foundation, making ten frames in all. The last one was put in the hive at 3.30 on June 2. Being favoured by a call from our expert (Mr. Herrod), who visited my apiary on June 3, at 9 a.m., I asked him to specially examine the hive in question, which he did, and to my surprise the comb last inserted was sufficiently drawn out to have eggs deposited by that time. This seems to me to be a remarkable queen, and the bees are also very energetic. I do not know if you have had such a record as this before. I should like to have your opinion on it, as it might be well worth the trouble to raise a batch of queens from her and requeen my apiary at the end of the season. I am looking forward to a good surplus from this hive if the weather is favourable.—THOMAS WELLS, June 6.

[Your queen is certainly a very prolific one and the workers energetic, and we should use this colony for raising queens if we required them.—EDS.]

Queries and Replies.

[3443.] *Dealing with May Swarms.*—Will you please tell me through your JOURNAL what you would do in dealing with the following stocks and swarms? A hive belonging to a friend of mine swarmed last Friday (May 20), and to-day (May 25) they have sent out another swarm. Is this an unusual occurrence, as it is only five days since the first swarm came off? 2. Would it be best to return the second swarm into the parent hive, or unite the two swarms together? Both swarms were very strong ones. Hoping for an early reply, I send name, and sign myself—COLESHILL, May 25.

REPLY.—There is nothing very unusual in what occurred; it only indicates that the issue of first swarm was perhaps delayed a day or two by adverse weather. If increase of stocks is not desired the bees of parent skep may be driven at once, as brood will all be hatched out and united to second swarm.

[3444.] *Transferring Bees to Frame-Hives.*—I should be glad of your kind advice with regard to the following circumstances:—I shall be having sent me early in June a swarm of bees on the straw skep in which they were hived on May 13. The reason I did not have the bees when they swarmed is that I shall be removing in a fortnight from my present address. I want to get these bees into a modern frame-hive, and wish to know if the best plan will be to put the skep on top of the frames (after fitting the latter with foundation) in the hope of the bees going below and using the combs they will have built

in the skep for storing honey. In this case I suppose I could remove the skep for cutting combs out any time after the said combs are clear of brood. Your suggestions as to the best method of procedure will be much appreciated by—A BEGINNER, South Woodford, May 25.

REPLY.—1. If the swarm is a strong one, and a good season follows, the bees will no doubt be able to build out the foundation and transfer their brood-nest below before honey-gathering ceases for the year; but we should restrict the lower hive to six or seven frames so that the bees may store surplus honey in the skep for removal as desired. 2. The best method of procedure is that described in "Guide Book," page 140.

[3445.] *Bee Farming and Poultry Raising.*—Will you be good enough to enlighten me as to which part you consider the best and most profitable for a bee-farm? I do not want to get too far away from London. My idea is to be able to clear on an average £1 per year from each hive. Can this be done in Surrey, Essex, Kent, or Sussex (Surrey preferred)? I may say I am well up in all bee-work. My idea is to take a small country business and work the bees and also poultry with it. Do you think I ought to succeed? I enclose name and address for reference, and sign myself—AMBITIOUS, Crouch End, May 27.

REPLY.—There are good honey districts in all the counties mentioned, but of course in this climate seasons vary very much. Such a combination as you propose should answer, as you would have a business to fall back upon and keep you employed when there is nothing to do with bees. We would not recommend either bee-keeping or poultry raising alone for a livelihood.

[3446.] *Dealing with Queenless Stocks.*—Will you most kindly give me your advice on the following? 1. On reaching home a week ago, after a long visit, I found one of my hives was queenless, and no sign of brood or eggs. The bees were rather strong in numbers, and as I thought they were old and probably would not accept a queen kindly, I decided to place the body-box over another strong hive, with a piece of brown paper between, and let them unite by working their way down. Unfortunately, I am not very strong, and can get no help, so as I found I could not lift the body-box, I placed an empty one upon the brown paper and removed the frames and bees into it one by one. It seemed to cause a great deal of disturbance, and long before I finished the bees realised that they were being made prisoners. I am afraid it was a clumsy method, but would you kindly tell me if I could have done better, allowing for the fact that I cannot lift a full body-box? There is no association here, so I can get no expert help. 2. I am so troubled also in this way, when I wish to scrape floor-boards, as I have to remove some frames until the body-box is light enough for me to lift; this makes so much more disturbance than is necessary that I dread the work of clearing away the winter débris. If you can give me any advice through the JOURNAL I should be most grateful. With apologies for troubling you, I send name for reference and sign—BUMBLE BEE, North Wales, May 27.

REPLY.—1. Your best plan would have been to follow out one of the methods of uniting recommended in "Guide Book," alternating the combs of the two hives or shaking the bees off the combs. 2. Place a clean hive with a clean floor-board close to the hive and transfer the frames into it; you will then be able to remove the old hive and floor-board for cleaning.

[3447.] *Ownership of Swarms.*—Will you kindly reply to the following query?—A swarm of bees came off and was hived all right, but having to wait a few days for arrival of a new frame-hive the bees were allowed to remain in the hiving-skep on the stand they were to occupy. When the hive arrived they were put into it by throwing out in front of entrance, as usual. Care was taken not to damage the bees by the newly-built combs falling on them when being jerked out of skep, and they seemed to enter the hive all right, but next day, which was very hot, the whole swarm came out and were followed across the garden over the fence into a small wood close by, where they clustered on the branch of a tree. Having located the clustering-place, the bees were left for a few minutes while I procured a hiving-skep and smoker, but on returning I found that two men (who had evidently been watching what took place) had procured a skep and hived the swarm therein. On being told that the bees were our property they refused to give them up, and eventually the policeman was sent for; the farmer who rents the farm also came up and claimed the bees as his by virtue of their being on land rented by him. He then ordered one of the men who had hived the bees to take them up to his farmhouse, which was done. The policeman, however, having made inquiries and found that neither of the men had bees of their own, afterwards ordered their return. The bees were eventually given up when we threatened with a prosecution for stealing and receiving. Will you kindly give the law on the point, and the Act of Parliament on which it is based? I send name for reference, and sign—AMBROSIA, Devon, June 1.

REPLY.—Blackstone states that so long as a swarm is kept in sight it belongs to

the owner from whose hive it departed. You have a right to the bees, but the owner of the land can sue you for any damage you may do in taking them.

[3448.] *Transferring Bees.*—I would feel much obliged for answer to the following query:—About two weeks ago I placed a box of bees on top of frame-hive over nine frames; how will I know when queen is gone down or young brood in box hatched out so that I can remove it? I enclose name for reference, and sign—J. M. D., County Kilkenny.

REPLY.—The only way to be certain is to remove the box for inspection, but a very good idea of the state of affairs can be derived by noticing how pollen is being carried into the hive, a rapid increase denoting that comb-building and brood-rearing are going on.

[3449.] *Beeswax for Show Purposes.*—1. I shall be glad to have your opinion of the enclosed sample of beeswax. 2. Referring to the prize sheet of coming show at "Park Royal," class 438, what is meant by "To be shown in shape, quality, and package, suitable for the retail trade?" Thanking you in anticipation, I send name and sign—APIS, Sidmouth, June 2.

REPLY.—1. Sample sent is very suitable for ordinary commercial purposes. 2. The wording of schedule is supposed to explain itself, and judges only have that wording to guide them. We may say, however, that it refers to attractiveness on counter of tradesman, with ease in handling the cakes of wax, and being kept clean by package in which they are encased. On the consumers' side the cakes should be of various sizes and prices to suit all requirements. We cannot say more than this in guiding exhibitors.

[3450.] *Bee Books.*—In returning herewith twelve numbers (received May 14) of Australian bee papers, I beg to tender my best thanks for the use of same, which have been very interesting to myself and friend Harris, who sails the last day of this month for Hobart. Also for the information one of your correspondents imparted through B.B.J. May I here ask a question? Can I borrow any other books on bee-keeping for my own study? I have the "Guide Book," and am about to get "Life of the Bee" (by Maeterlinck). If so, I should be delighted with same for perusal and will gladly forward postage fee.—W. G. A., Oxford, June 4.

REPLY.—The British Bee-keepers' Association has a good library of books, and members are entitled to the use of them. If you are a member you should apply to the secretary, Mr. E. H. Young, 12, Hanover Square, London, W.

[3451.] *Bees Swarming Out.*—On Wednesday last the bees of one of my hives came out, as if swarming, but instead of clustering, some alighted on the trees and grass, and some got on one of the other hives. After a time the bees returned to their hive again. The next day I examined the hive and found a queen cell capped over, some drone brood, but no drones have yet been hatched. To-day the bees have come out again in the same manner, and again returned to the hive. As I wanted a swarm from this hive, I have kept them on eight bars. The bees cover all the bars and have a nice lot of brood. As it has been cold until recently I have kept all the winter coverings on the bees. I shall be glad if you can please say what is the cause of the bees acting in this manner. Do you think it is because they are short of room and also with being kept too warm? An answer through the B.B.J. will greatly oblige. I enclose name and sign—SWARMING, Keighley, June 4.

REPLY.—The hive is evidently too crowded, and you should let the bees have two more frames. The bees swarm out for want of room and ventilation, but as they are not accompanied by their queen they return. With a continuance of this warm weather they ought to swarm in a day or two.

[3452.] *Transferring Bees.*—I should be glad for you to kindly inform we what is best to do with the following through your B.B.J. On April 9 last I placed a colony of bees, that I purchased last autumn, on the top of a "W.B.C." hive, for them to transfer as per "Guide Book." The bees in question are in an old box-hive with only a small aperture on the top. I have had ten frames with full sheets of foundation under them up till to-day, when I removed three frames and closed up. Up till now they have only just commenced to draw out the sheets of foundation, which seems a long time about. I am anxious to get the queen below, and remove the old hive, for the combs are black and of old standing, but there does not seem any chance of getting her below. Last Sunday, May 29, I had a fine swarm from the same hive, and although there was plenty of room below, it did not appear to stop the swarming fever. The old hive now seems simply crowded, as also there is a fair quantity on the frames below. Can I expedite the transferring, or must I let things go on till they are established below? The swarm mentioned previously I gave six frames with full sheets and fed with syrup, and to-day I find all the combs are drawn out and commenced filling with honey. No signs of any breeding. How long is it before the queen commences egg-depositing? I am a novice, and thank

you in anticipation for advice.—BEGINNER, Havant, June 6.

REPLY.—It is difficult to prevent swarming when bees have decided to do so. Your best plan would have been to put the swarm in frame-hive. Let the bees have time, and if the season is a good one they ought to work down and take possession of lower chamber. The queen usually begins laying eggs when there are cells ready, but if she is a young queen, forty-eight hours after mating with drone.

[3453.] *Bee-keeping in Canada.*—I should be glad to know if bee-keeping is at all extensively carried on in Canada, and particularly if the Saskatchewan Valley would be a favourable country for it. Are hives and their dimensions of the same standard as in this country, and would there be any advantage or interest attached to taking over some English bees? If you or any of your readers can give me information I shall feel greatly obliged.—G. S. M., Birmingham, June 7.

REPLY.—Bee-keeping is carried on extensively in Eastern Canada, principally in the province of Ontario, but bees do well in other parts also. There would be no advantage in taking English bees out with you, as bees can be purchased in Canada. We would also advise you to use the hives made in the country, as the frame in general use there is slightly larger than our standard. The Gould Shapley Co., Brantford, Ontario, would supply you with both hives and bees.

[3454.] *Transferring Bees.*—Last year I purchased an old stock of bees in a condensed-milk box. On Saturday, April 30, wishing to have them in a frame-hive, I followed the instructions given in the "Guide Book" for allowing the bees to transfer themselves. On Saturday, May 28 (four weeks later), I looked at them, but although there was plenty of brood in old hive, there was none in frames, so I replaced the old hive and left them as they were; the foundation in the frames had been drawn out and was being stored in it. Would you be good enough to advise me what it would be best for me to do to get the queen to lay her eggs in the frames, so that I may remove the old hive and replace it by a super as soon as the brood has been hatched out? Would you tell me the best way to get the bees out of the old hive as soon as I shall be able to remove it? Thanking you in anticipation of your advice, I send name and address for reference and sign—ACACIA, Kent.

REPLY.—You must let the bees have time to take full possession of the lower hive. When the queen lays in the lower story, and the brood hatches out in the box above, then combs will be used for storing honey. The upper chamber can then be removed at any time. The bees can be got out of the old hive by using a board with a bee-escape.

WEATHER REPORT.

WESTBOURNE, SUSSEX,
May, 1904.

Rainfall, 3·83 in.	Minimum on grass, 27° on 3rd and 9th.
Heaviest fall, 89 on 20th.	Frosty nights, 0.
Rain fell on 16 days.	Mean maximum, 59·5.
Above average, 2·01 in.	Mean minimum, 45·1.
Sunshine, 162·4 hours.	Mean temperature, 52·3.
Brightest day, 19th, 14·3 hours.	Above average, 1·2.
Sunless days, 3.	Maximum barometer, 30·34 on 13th.
Below average, 78·3 hours.	Minimum barometer, 29·55 on 7th.
Maximum temperature, 69° on 30th.	L. B. BIRKETT.
Minimum temperature, 34° on 9th.	

REVIEWS OF FOREIGN JOURNALS.

By "Nemo."

In *L'Union Apicole*, Abbé Maujan has an article on "The Utility of Associations in Bee-keeping." He points out how associations have assisted their members by popularising honey through their publications, and, above all, for creating markets for honey. He shows the benefit that has been derived from the exhibitions and honey markets organised by the societies, which have been the means of enabling their members and others to find a market for their products, which otherwise they could not have done. Such exhibitions can only be brought about by societies, owing to their cost. He points out that "union is strength," and what it would be impossible for a single individual to accomplish for his advantage the society can do. In protecting his legal rights, the society can do more than he can himself in the courts of the land, but, what is still more important, a society can make its influence felt in the legislature, where an individual would not be noticed.

In *L'Apiculteur* a writer says that capped honey is not necessarily ripe, and relates an experience derived in his own apiary. His supers were being rapidly filled when suddenly, on June 4, the yield of nectar ceased, and some of the supers were not nearly completed and there was much unsealed honey. On June 16 the second flow of nectar commenced, and in order to avoid the mixing of the two harvests it was decided to extract all the honey from the first harvest. The uncapped honey was extracted first and then that

capped, and care was taken to keep them apart in separate jars. The writer was astonished to find that the unsealed honey was some days sooner in granulating than that which was sealed, showing that it was riper. He explains it by saying that bees cap the honey-cells as soon as they are full, even if the honey is not always ripe. On the other hand, when a harvest ceases suddenly, the unfinished combs, although containing thoroughly ripened honey, remain uncapped. In his opinion, it is not correct to say that in order that honey should keep well all combs should be completely capped; it is preferable to make sure that it is ripened and evaporated to a proper density.

In the *Rucher Belge*, the editor, M. Wathelet, describes how he stopped a bad case of robbing by finding occupation for the robbers. He required combs of stores for feeding certain colonies, so he placed frames into the hive of the robbers and on top a feeder which for eight days was supplied with sugar syrup. Ten frames were filled and these were distributed where required and empty ones put in their places. During the whole of the time that the bees were filling the combs no robbers were seen; after that there were a few, but they soon disappeared.

In the *Canadian Bee Journal* the editor gives a simple way of patching combs that have been injured by mice. Cut off the top from an empty tomato can, leaving the edge as straight as possible, use this for cutting out the mouse-eaten part of the comb, and forming it so that it can be easily patched. Then cut out four patches of sound comb in the same way and attach them with a few drops of wax, just enough to hold them in place, and the bees will do the rest.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 7 to 10, at Guildford. — Royal Counties Agricultural Society's Show. Bees, Appliances, and Honey Department, under the management of the Surrey Bee-keepers' Association. Twenty-one classes. Schedules from F. B. White, Hon. Secretary, Marden House, Redhill, Surrey. **Entries closed.**

June 21 to 25, at Park Royal, London.—Royal Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A. Increased prizes for B.K.A. Associations as arranged in divisions or groups of counties. Schedules from Edwin H. Young, Secretary, 12, Hanover-square, W. **Entries closed.**

July 14 and 15, at Grimsby.—Show of Honey, Hives, and Bee Appliances in connection with the Lincolnshire Agricultural Society. Bee Department under the management of the Lincs. B.K.A. Fourteen classes. Liberal money prizes and silver medals. Schedules from R. Godson, Hon. Sec. Lincs. B.K.A., Tothill, Alford, Lincs. **Entries close June 14.**

July 27, at Henbury, near Bristol.—Annual Show of the Henbury District Bee-keepers' Association in connection with the Horticultural Society's Exhibition. Several open classes with good prizes (two classes with free entry). Schedules from the Hon. Sec., J. Atkin Waller, Pen Park, Westbury-on-Trym, near Bristol. **Entries close July 22.**

July 27 and 28, at Cardiff.—Glamorgan B.K.A. Show of Honey and Appliances in connection with the Cardiff and County Horticultural Society's Exhibition in the Sophia Gardens, Cardiff. Seven open classes for Sections, Extracted Honey, Beeswax, and Honey-comb Designs, also for Hives, Collections of Appliances, and Observatory Hives. Schedules from Wm. Richards, Hon. Sec., Glam. B.K.A., Gabalfa, Cardiff. **Entries close July 21.**

July 29, 30, and August 1 and 2, at Southport.—Annual Show of the Royal Lancashire Agricultural Society. Liberal money-prizes are offered for honey along with silver and bronze medals of the B.K.A. and also of the Society. Open classes for Honey-Trophy, Sections, Extracted Honey, Beeswax, Honey-Confectionery, Bee Flowers, Instructive Exhibits in Bee-Culture, &c. Schedules from Edward Bohane, Secretary, Miller-arcade, Preston. **Entries close June 29.**

August 1 (Bank Holiday), Windsor District Berks, B.K.A.—Annual Show of Honey and Bee-Appliances in conjunction with the Clewer Horticultural Society, in the grounds of Clewer Manor (by permission of E. B. Foster, Esq., J.P., C.C.). Open classes for Observatory Hive, Twelve 1-lb. Sections, and Twelve 1-lb Jars Extracted Honey. Also classes for Berks only, and for Windsor District only. Schedules from W. S. Darby, Hon. Sec, Consort Villas, Clewer. **Entries close July 23.**

August 4, at Kingsthorpe, Northants.—Honey Show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar of honey. (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Hon. Sec., Kingsthorpe, Northampton. **Entries close August 1.**

August 10, at Wye.—Kent Honey Show.—Several classes for Extracted and Comb Honey, Trophy, Wax, Mead, Cakes, &c., &c. Liberal cash prizes and silver medals. Open Classes for Single 1-lb Jar Extracted Honey (Light); Ditto (Dark); Single 1-lb. Section, with prizes of 20s., 10s., and 5s. in each class. Bee Demonstrations, Horticultural Show, Cycle Sports, &c. **Entries close August 5.** Schedules from J. Tippen, Secretary, Wye, Ashford, Kent.

August 24, at Fleetwood.—Honey Show in connection with Fleetwood Floral and Horticultural Society. Open classes for Six 1-lb. Sections. Six 1-lb. Jars Light Extracted Honey, and Six 1-lb. Jars Dark Extracted Honey. Schedules from Edward Cook, Hon. Sec., Rossall Grange Farm, Fleetwood. **Entries close August 14.**

August 24, at Sandbach.—Honey Department of the Cheshire Agricultural Society's Show, under the management of the Cheshire B.K.A. Open classes for Hives, Sections, and Extracted Honey. Substantial prizes. Bee Lectures and Demonstrations on the show-ground Schedules from T. A. Beckett, St. Werburgh's Chambers, Chester. **Entries close August 3 (at double fees August 10).**

August 24 and 25, at Leamington.—Annual Show of the Warwickshire B.K.A. in connection with that of the Warwickshire Agricultural Society. Schedules from James Noble Bower, Hon. Sec., Warwickshire B.K.A., Knowle.

August 25, at Llangollen.—In connection with the Sixth Annual Flower Show. Open classes for Six 1-lb. Sections, Six Jars Extracted Honey, and Beeswax. Schedules from Frank Little, Brook Bank, Llangollen. **Entries close August 11.**

August 30, at Cartmel, Lancashire.—Honey show in connection with the 32nd Annual Show of the Cartmel Agricultural Society. Three open classes for Comb and Extracted Honey (prizes, 15s., 10s., 5s., and 2s. 6d.), and Beeswax (prizes, 10s. and 5s.), along with silver and bronze medals of the Lancs B.K.A. Schedules from W. Cragg, Secretary, Cartmel, via Carnforth. **Entries close August 18.**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisement. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

E. E. S. (King's Norton).—The fermented honey will probably be liquid enough to wash out by spraying with some force with a garden syringe. We should first dip the combs in water and then syringe them.

J. W. L. (Portinscale).—Open the entrances to full width, and in addition the hive may be wedged up if necessary. Ventilation can also be given by raising the outer cases so as to admit of free circulation of air round the body boxes.

C. F. (Conway).—The specimen sent is the Beamtree (Pirus aria). It belongs to the pear family and produces nectar abundantly. It is not very common, although it occurs in a wild state in our woods.

AMATEUR (Ilford).—We presume you have not kept bees before, therefore recommend that you should get a "Guide Book," which will give all information about the management of bees. After you have looked through it, if you are in any difficulty, we shall be glad to advise. If the weather keeps fine your swarm will do without help, but if it should turn cold and wet, feeding will have to be resorted to.

JOHN BRYANT.—If you will send a stamped letter to this office it would be forwarded to "Desunt Cætera," Lincs.

WALTON PARK Clevedon).—1. You need not fear about the swarm, if fed on medicated food, but you should destroy the queenless lot. 2. No. 3. Not unless it is boiled and medicated with naphthol beta.

ENQUIRER (Cheshire).—There are good districts in Cheshire. You should apply to the Secretary Cheshire B.K.A., the Rev. J. Charley, Ince Vicarage, Chester.

Suspected Combs.

ANXIOUS (Derby).—It is a case of foul brood, but there is also some chilled brood in the comb sent.

W. J. (Darlington).—1. Sample sent is affected with foul brood. 2. The drone brood in worker cells shows that the stock is queenless, and therefore worthless. We should destroy the bees and contents of hive.

HORTICUS (Leicester).—The comb reached us badly crushed, but we could only detect chilled brood in the few cells that were available. No foul brood found.

G. H. (Congleton).—Dead brood in comb is "chilled" brood only.

ST. LEONARD (Devon).—The specimen No. 1 contains dead brood, not foul brood. We did not find any cells containing brown matter in No. 2, which also contained dead brood. When next you examine the hive notice if there are any diseased larvæ and send another specimen.

G. B. (Buntingford).—Foul brood is developing in unsealed larvæ. Try treatment recommended in "Guide Book."

ICHABOD (Kirkcudbrightshire).—It is a case of foul brood and should have attention.

Special Prepaid Advertisements.

Twelve words and under; Sixpence; for every additional Three words or under, One Penny

Advertisements for current issue must be received by first post on Tuesday.

NEARLY NEW OBSERVATORY HIVE, "Howard's," complete. What offers? MISS COCKERHAM, Basford, Nottingham. B 31

WANTED, SECTION HONEY, best quality. MASON, 93, Goldeston-road, Clapton, London, N.E. B 22

STRONG HEALTHY NATURAL SWARMS, 12s. 6d., including skeps, guaranteed safe arrival. CADMAN, Codsall Wood. B 21

GOOD NATURAL SWARMS, from Frame-Hives, 12s. 6d. SOLE, Expert, 105, Graham-road, Wimbledon. B 38

EXCELLENT 1904 QUEENS (fertile), 5s., by return post. The Apiary, 8, Grange-street, St. Albans. B 23

WANTED TO PURCHASE First Class CLOVER and HEATHER HONEY in bulk this season when ready. Send price to W. LONG, 12, Webster Place, Makin-road, Attercliffe, Sheffield. B 34

STRONG AYLESBURY or PEKIN DUCKLINGS, 8s. 3d. per doz. or Exchange Strong STOCKS BEES (on Standard Frames), 24 for each Stock. POMFRET, Bedford-street, Blackburn. B 37

WANTED to EXCHANGE, ONE COCKEREL, 12 PULLETS, Buff Orpingtons, 1903, for GEARED HONEY EXTRACTOR, or ITALIAN SWARMS. TATNALL, Horeham-road, Sussex. B 27

WANTED, EXTRACTOR, must be cheap and in good order, also swarms. JOHNSON, Bridge Trafford, Chester. B 25

HEALTHY FERTILE QUEENS, 1904, ready now, Prolific Strain, 5s., with Introducing cages. Safe arrival guaranteed. E. W. CARBINES, Bee Expert, Cardinham, Cornwall. B 30

WANTED, THREE Strong Healthy STOCKS, in Skeps. LORD, Longsdon, Stoke-on-Trent. B 24

PRIME NATURAL SWARMS, 12s. 6d., 13s. 6d., 1903 Queen. Second Ditto, 1904 Queen, 9s 6d. 1904 Tested Queens, 5s. 6d. Guaranteed healthy. W. WOODS, Normandy, Guildford. B 35

HANDSOME Blue ticked young SETTER offered, ready for breaking, for strong STOCK or SWARM of healthy BEES, in Bar-frame or Skep. DR. WALKER, Kirkby-Stephen. B 28

QUEENS, IMPORTED ITALIANS, 6s. 6d.; home-raised, from imported mothers, Italians and Carniolans, 5s.; British, 4s. each; in introducing cages. Also Nuclei and Swarms. Safe arrival guaranteed. This is my 27th year of advertising in *B. B. J.* State your requirements. E. WOODHAM, Clavering, Newport, Essex. B 26

WANTED, ONE GROSS clean New SECTIONS; also HONEY in bulk. A. COOK, 54, Hop Exchange, Borough, London, S.E. B 29

FOR SALE, Strong healthy STOCK, Eight Frames, 1903 Queen, 16s. ARTHUR, 226, West George-street, Glasgow. B 33

Editorial, Notices, &c.

ROYAL AGRICULTURAL SOCIETY.

SHOW AT PARK ROYAL, LONDON.

The warm weather we have recently experienced and freedom from frosts have had a good effect on our bees, and from all sides we hear of supers and sections being rapidly filled, so that there is every promise of a good show of honey at the Royal next week. It is hoped that this year the attendance will be larger than it was last year, when so many stayed away on the plea that the ground was so inaccessible. We hear of many complaints that it was difficult to get to the show ground, but if bee-keepers will study carefully the directions given below they will find Park Royal is not only conveniently situated, but easily reached from any part of the country.

Park Royal is situated north of Acton, about six miles from the Marble Arch. It lies between Willesden on the east and Ealing on the west, and is served by three new railway stations (see map on page 232).

Great Western Railway. — Park Royal Station, adjoining the western entrances.

On each day of the show a special service of trains will be run from Paddington Station to Park Royal Station and from Park Royal Station to Paddington Station at intervals of about twenty minutes ; also, at intervals of about an hour, between Clapham Junction, Kensington (Addison-road) and Park Royal, calling at Battersea, Chelsea, West Brompton, Uxbridge Road, and St. Quintin's Park, and giving connections from and to Victoria and Waterloo.

A service of through trains will be given between the Metropolitan Line and Park Royal.

There will also be a rail motor service on each day of the show between Southall and Hanwell and Park Royal at intervals of about an hour.

Connections with the Great Western system.—Metropolitan Railway, Bishop's Road and Praed Street Stations, connected by covered ways with Paddington Station. Central London Railway, Lancaster Gate Station (a short distance from Paddington), Shepherd's Bush Station (close to Uxbridge Road Station).

London and North-Western Railway.—Royal Showyard Station, adjoining the eastern entrances ; for stations on the London and North-Western, North London, and West London Extension systems to Willesden Junction, changing there for Royal Showyard Station.

District Railway. Park Royal and Twyford Abbey Station, near the western entrances. Serving all stations on the District Railway and its connections with other lines, *viâ* Earl's Court and Mill Hill Park.

Direct connection is thereby afforded with—

The London, Tilbury, and Southend Railway, *viâ* East Ham or *viâ* Mark Lane and Fenchurch Street.

The London and South-Western Railway *viâ* Richmond or *viâ* Wimbledon.

The London, Brighton, and South Coast and South-Eastern and Chatham Railways, by subway at Victoria Stations.

The South-Eastern and Chatham Railways (Charing Cross Terminus) closely adjoins the Charing Cross (District Railway) Station, while subways connect St. Paul's (South-Eastern and Chatham Railway) Station with Blackfriars (District Railway) and the Cannon Street Stations of South-Eastern and Chatham and District Railways.

The London and South-Western Railway, Waterloo Terminus, is within easy walking distance of Charing Cross and Westminster Stations.

The Great Eastern (Fenchurch Street) Terminus is within two minutes' walk of Mark Lane Station.

At West Brompton, connection is afforded with the West London Extension Railway, Battersea, Clapham Junction, etc.

At Ealing Common Station connection is made with the London United Electric Tramways westward to Castle Hill, Hanwell, and Southall.

Chiswick Park Station is within two minutes' walk of tramcars running through Kew and Isleworth to Twickenham, Teddington, Fulwell, Hampton, Kingston Bridge, Hampton Court, etc.

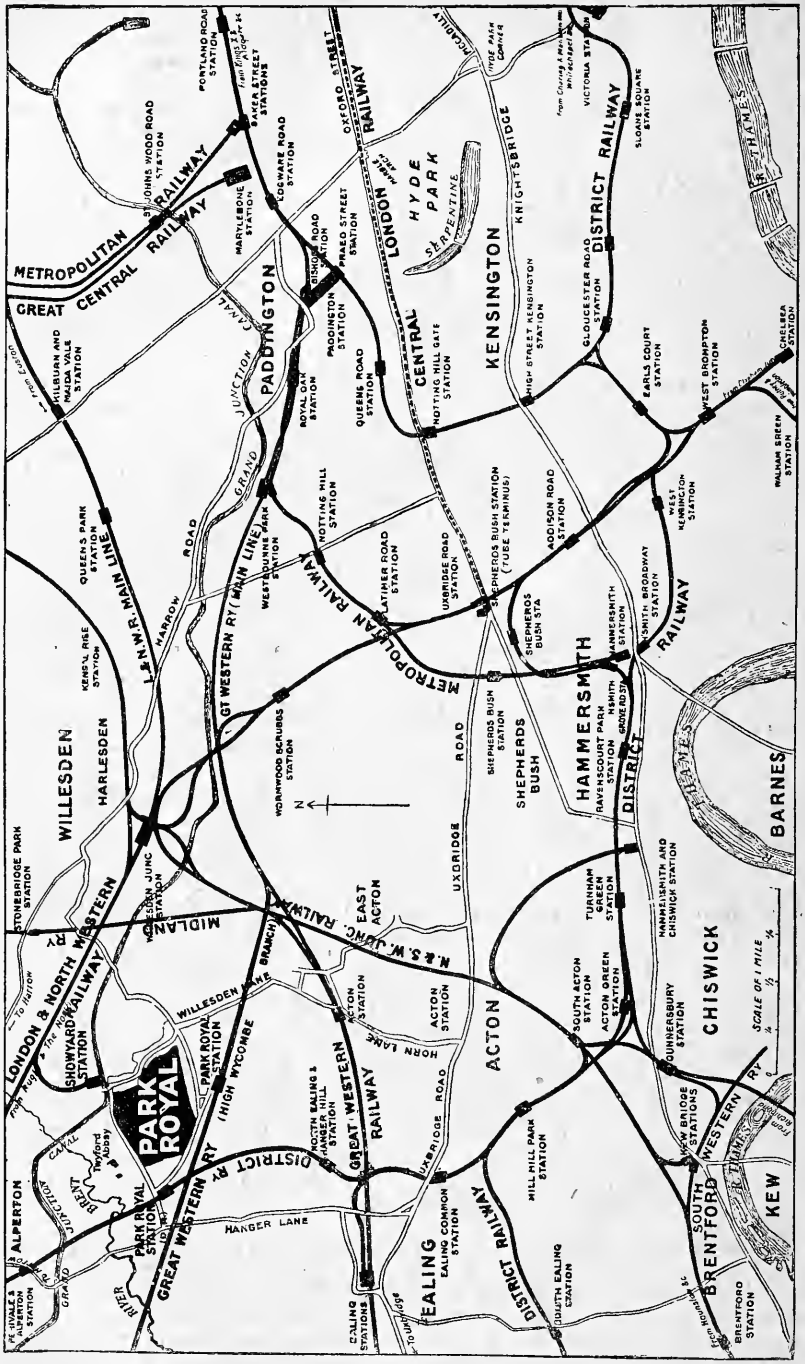
By Electric Tram and Railway.—From East or West along Uxbridge Road to Ealing Common Station ; thence by District Railway to Park Royal and Twyford Abbey Station.

BY ROAD.

Harrow Road Route.—Marble Arch, Edgware Road, Harrow Road, High Street, Harlesden, Acton Lane, and thence to entrances in Abbey Road or Coronation Road, as directed by the police.

Uxbridge Road Route.—Marble Arch, Bayswater Road, Uxbridge Road, Horn Lane (near Acton Church), Willesden Lane, and thence to entrances in Abbey Road or Coronation Road, as directed by the police.

Hanger Lane Route.—From any thoroughfare converging on Ealing Common



viâ Hanger Lane and Twyford Abbey Avenue to the western entrances in Coronation Road.

It will be seen that there is no difficulty in getting to the Royal Show. We hope to be favoured with fine weather, and trust that we may meet many of our friends in the "Bee Department." The show opens on Tuesday, June 21, and closes on Saturday, June 25.

HUNTS B.K.A.

A meeting of the above association was held at the Fountain Hotel, Huntingdon, on May 28, Mr. Sharp, of Brampton, occupying the chair. It was decided to offer prizes for honey and beeswax at the show in connection with the Hunts Agricultural Show, and to do likewise (funds permitting) at the Horticultural Show. It was stated that the Hunts Education Committee had decided not to make a grant of £20 which they gave to the society for technical instruction last year. Mr. Howard, of Holme, brought forward a scheme he had in view for education in bee-keeping, by which those who were desirous of instruction in the practical part might be allocated to the nearest apiary, the owner of which would impart such knowledge as was desired, and receive some remuneration for his time and trouble. Mr. Howard said that, as matters stood, they would be unable to launch that scheme, but he thought that, by the fact of the grant being withheld, the county would be the losers, and not the association.

DEVON B.K.A.

A meeting of the Council of the Devon B.K.A. was held on May 27. Present: Colonel H. J. O. Walker (chairman), Miss M. Pittis, Messrs. W. H. B. Catford, Mark Farrant (hon. treasurer), R. Turse, T. W. Palmer, A. S. Parrish, F. P. Smith, H. Tolson, E. E. Scholefield (hon. secretary). The draft of a Bill for the better prevention of bee-pest, submitted by Mr. G. M. Saunders, hon. secretary Cumberland B.K.A., was considered. It was unanimously decided to forward the draft, with the strong recommendation of the D.B.K.A., to the Devon County Council, and to express the hope that the D.C.C. would inform the Board of Agriculture of their desire that the Bill should be passed as a Government measure, and of their intention to avail themselves of the powers that the Bill would confer upon them. The annual Association Honey Show will take place at Paignton in July.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of May, 1904, was £5,038.—From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "THE EDITORS of the 'British Bee Journal,' 10, Buckingham-street, Strand, London, W.C." All business communications relating to advertisements, &c., must be addressed to "THE MANAGER, 'British Bee Journal' Office, 10, Buckingham-street, Strand, London, W.C."

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[5544.] We are again near to the longest day, and the old adage "June puts things in tune" is once more verified. We had a short period of sunshine about the 5th and 6th, then several gloomy, dull days which somewhat retarded the work of the bees, especially swarming. In my two large apiaries I had no swarm come off from Tuesday, 7th, till yesterday (Sunday), when old Sol asserted his power and we had a glorious summer day, and half a dozen swarms came out and were hived within an hour. Others followed later, inducing my neighbour to say I was pretty busy if 'twas Sunday. My rejoinder was that the ox was not in the pit, but the bees were up the tree, and I must needs put them in a new hive. To-day has not been quite so bright, yet the bees have swarmed and worked as only bees can when honey is to be had for the ingathering.

Mr. Darlington refers in "Echoes from the Hives," page 217, to my note on spring feeding. When writing I had in my mind the attenuated system of feeding in vogue, giving one or two holes, yclept slow feeding, man's fashion, and the feeding of Dame Nature, something after the old saw, "It never rains but it pours." I feed every spring stocks that require feeding, but year after year practice proves that those stocks left well off in the autumn come out, other things—i.e., queens young and bees vigorous—being equal, far before stocks that require, shall I say? some coddling to bring them through. In the matter of feeding my system is not of the orthodox pattern, and my feeders also are very primitive. I have no thumb-screws to allow an extra half-dozen bees to partake of the feast of syrup. My feeders are one and two pound jam bottles or tie-over honey jars, with an oblong piece of zinc or tin, with the two ends turned over just to clip the tie-over lip of the jar, with a number of small holes punched in, or near, the centre of the

piece of metal. The bottle, when filled, is inverted over a square of wood with a 2-in. hole in it. The bottles are always given full, and the bees can take all the syrup down in a few hours, but the frugal creature does not consume it as taken, but stores it where required for feeding as the brood-nest enlarges. My feeders cost about 2d. each, and are as effective for the wants of the bees as the most elaborate, with all the thumb-screws dispensed with.

Packing Bees.—I fear there is no perfect system of packing bees to send by rail when the thermometer registers 115 deg. to 120 deg. I have lost a few swarms from heat, but the loss is only a small percentage of all I send out. I feel my system cannot be much improved upon. Last year I had my boxes cut somewhat deeper, and again this season, but we have not had that intense heat and honey glut to combat. I believe that the interior of railway vans must be over 120 deg. when the weather is very warm, and if packages of soft material are thrown on the top of boxes containing living bees, that is the cause of losses, and the railways ought to be responsible.

Queen Rearing.—Our esteemed "D.M.M." refers to this new system, and I have no doubt we shall soon have advertisements of queens at cutting prices; something cheap, let us hope, and good—but I doubt if we shall improve on Nature's plan. I have cut out of a hive to-day, which swarmed on June 4, five or six as fine queen-cells as one could wish for—cells which contain queens reared under the swarming impulse in a colony on twelve frames. These are good enough for me, and queens such as these have for these twenty years been the backbone of my profitable bee-keeping. The results produced by the purchase of two queens for the same sum may prove dear at any price, as we lose a season trying to find out the good qualities which they do not possess.—W. Woodley, Beedon, Newbury.

TWO QUEENS IN HIVE.

[5545.] I have at the head of one of my colonies of bees an Italian queen imported from Italy last May from one of your advertisers. She was supposed to be an extra fine selected queen, and cost me 15s.; but she has not been, in my opinion, so good as some I have bought from other Italian breeders for 5s. each. Though I only consider her a moderately good queen, she has been increasing the brood-nest this spring until now there are six full frames of brood out of the ten in the hive. I could not expect more, as the bees have gone down in number in the winter somewhat. Now, the curious thing is that the bees have raised a young queen, and as I knew that they were not likely to swarm (the weather not being fit; and there being plenty of room in the hive), I allowed the young queen to hatch, and she has been in the hive now for ten days. I notice that the young queen is taken as much notice of as the old one by the bees. I suppose the explanation is that the bees are requeening themselves, though I do not know why. The old queen does not seem past work yet; she seems all right. The brood is all worker-brood, and she seems to keep the cells well filled. She also looks a fine large queen, the abdomen being as large and full-looking as any queen I have got, though some others I have are keeping ten frames full of brood. What I should like to know is, What will become of the old queen when the young one becomes fertile? Unless you advise otherwise I am going to let them go on together, and see what happens. I suppose they are not likely to go on together in the same hive (I believe this has happened)?—A. Watson, Sutton Coldfield, May 28.

[Usually when a queen is being superseded, she is worried to death, although there are known instances of two queens living for some time in different parts of the same hive.—Eds.]

A LOST QUEEN.

[5546.] Rather a curious thing as to a queen knowing her own hive occurred in my small apiary last week. My only skep being full to overflowing, I took a frame of brood from each of my six frame-hives and made an artificial swarm in the usual way, by moving the skep some distance away and leaving its flying bees to rear the brood in the six combs. Whilst clearing away, I noticed to my dismay a live queen in the wheelbarrow I had been using, but not having time to examine the hives as to which had lost their queen, I ran her into the artificial swarm. On examining this hive a few days later I could find no trace of this queen, and I then found that the six frame-hives had each their queen quite safe. I therefore concluded that the flying bees of the artificial swarm had turned this queen out and that she had flown back to her own hive again. I think it a remarkable thing that this queen should know her hive again, seeing that she can only have left it perhaps only once before for mating purposes.

Foreign Honey.—I saw a bottle in a shop window labelled "Pure Honey," price 7½d. Out of curiosity I bought it. It tasted like sugar and water and weighed only 12 oz. of honey. If we value the bottle at

1½d., it leaves the honey at 8d. per lb., which I should consider a good price, even for English honey. Referring to foreign food, I should mention that I passed a large shop where nothing but foreign meat was sold. On inquiring the price of rump steak, the shopman promptly answered, "One shilling per pound for this Deptford killed American beef, sir!" I moved on feeling sad for the English farmer, and quite understanding why he can scarcely make both ends meet.—BEE-KEEPER, Cheltenham, June 11.

THE "RYMER" METHOD.

[5547.] On May 16 last a hive, being crowded with bees on ten frames, was given a second brood nest of ten frames containing full sheets of foundation. The bees took to this chamber immediately, and within a week the queen was laying there freely. Good behaviour was expected from this colony in the way of no swarms. On June 22 last, wishing to give a class of boys a practical lesson in bee-keeping, I examined this twenty-frame colony in their presence, and discovered eleven queen-cells, some nearly mature, four in the lower and seven in the upper chamber. There was also a large quantity of drone brood along the bottoms of the frames, and about 15 lb. of honey stored in upper chamber. This does not speak well for the "Rymer Method" of preventing swarms in this district, and I should advise all bee-keepers adopting the method to be on the look-out. However, mine may be an exceptional case. Another strong colony in a "Wells" hive had the brood nest gradually enlarged, by splitting every nine days till it contained eighteen frames, and was then supered with five shallow frames, and another five added at the end of a week. The result of this continual yet gradual enlargement, as shown by frequent examinations, reveals no queen cells, fifteen out of eighteen frames full of brood, and good work in the supers. I believe that to control the swarming one must not only give room, but give it gradually in the centre of brood-nest or super, and then the bees will make use of it at once. A third lot, a swarm of this year, was hived on May 30 in a skep, and in six days' time this was supplied with shallow-frame super, as the bees had no room. They did not enter the super, so I reduced to four frames, and to-day they are quite busy on them. We have a five-frame observatory hive in the school window. The frames are taken out and shown round the class, and although occasionally a bee alights upon a child there have been no stings. I should like our friend, who last year spoke about the class of noisy children during bee-keeping lessons, to be present when going through this hive with a class of children. He would hear nothing save occasionally an exclamation of wonder or delight drawn forth by the sight of a comb thickly covered with bees or the recognising of the queen or eggs amongst the moving mass. In conclusion, I wish all bee-keepers a successful season, and hope others experimenting with the "Rymer" or other methods of preventing swarming will give us the result of their experiments.—CHARLES MOSLEY, Aberdare, June 8.

EXTRA-FLORAL NECTARIES.

[5548.] I have been very much interested in watching the bees to-day working diligently on the cheery-tree in our garden. They were sucking the glands at the base of the lamina of the leaf. They carefully avoided the leaves on the old wood, on which the glands are not nearly so well developed as those on the new shoots.

I have never before noticed bees working on the cherry-trees, and in this way. Nor do I remember ever seeing it referred to in the BEE JOURNAL, and so venture to send you this note. Possibly if we were in a more generous neighbourhood for forage the bees would not think of the glands on the cherry leaves. With all good wishes to you—U. M. HALL, London, N.W., June 13.

[It is known that species of *Prunus* have nectaries on the leaf-stalk in the shape of small glandular protuberances. Nectaries are also found on the leaf-blade of laurels, and the stipules of beans and vetches are also nectariferous.—EDS.]

Queries and Replies.

[3455.] *Section Honey.*—I should be glad if you could answer the following queries in the columns of your paper: 1. Is the honey in sections ready to be eaten directly it is removed from the hives, or is it better kept for a time, and if so, for how long? 2. What are the best conditions under which to store sections for future use? Being a bee-keeper on a very small scale, it is not worth my while to invest in a storing-crate. I therefore ask whether they ought to be kept in an air-tight box or under any other special conditions. 3. Are Italian bees generally considered of a higher monetary value than the ordinary English bees? 4. I should be glad if you could tell me what member of the bee or wasp family the enclosed nest belonged to. I found it, as it were, growing on the side of a stone-wall by the roadside in Switzerland.

I do not know whether the enclosed snapshot of a Swiss apiary would interest your readers, but if so you are at liberty to publish it. 5. Can you supply me with the list of honey and pollen-yielding plants mentioned in your issue of May 5, p. 173, and if so, what is its price? Thanking you in anticipation for answering my queries—E. R. Houghton, Lansallos, June 7.

Reply.—1. Yes, it can be eaten as soon as taken from the hive. 2. The sections should be wrapped in paper (glassilene if you can get it), and stored in a warm, dry place, as moisture is detrimental to their keeping qualities. 3. Italian bees cost more in this country, but are not always of a higher monetary value. Much depends upon where and how they are reared as to their value in our climate. 4. The nest is that of a wasp, *Pollistes gallica*, very plentiful on rocks in Switzerland. 5. The list alluded to can be procured from Messrs. Sutton and Sons, Reading. We are much obliged for pretty snapshot of bee-house.

[3456.] *Excited Bees.* — We only commenced bee-keeping last year, with one stock of bees, so would be very glad of a little experienced advice. On May 15 we made an artificial swarm, as the colony seemed to be very strong. We followed directions given under "Queen-Rearing," and calculated that the queen would hatch out on the 31st. There were several fine days just after that, and we concluded that she would have accomplished her mating flight. But yesterday, the 9th (a very dull day, though warm), about noon, the bees began to be very uneasy, running about most distractedly, as if they had lost their queen; this continued till evening. We noticed no fighting of any kind, though there was a great buzzing inside the hive; also, there were no sentinels posted. This morning, however, they seem to be all right, and working well considering the weather, and about one-third of those out are bringing in pollen. We are at a loss to account for this, and have not examined the hive for fear of causing further disturbance. We should be very much obliged if you would give us your opinion and advice on the subject in your next number (if possible). We enclose names, and sign—S. M. and G. R. B., Willesden, June 10.

Reply.—You can determine if the bees have lost their queen by an examination of the hive. Such excitement as you describe frequently occurs when warm weather comes suddenly after cold. When a hive loses its queen the excitement does not subside so rapidly, but sometimes continues for three days, and although they settle down quietly, a decidedly dissatisfied appearance is noted, and the returning bees linger on alighting-board.

[3457.] *Bee Paralysis.*—Can you suggest a remedy for the following difficulty? My young bees, hatching out freely, after loitering on the floor-board, have been falling off in great numbers, and dying on the ground, all unable to fly. All hives were very strong, and well supplied with food and syrup, till they received a check during May 16-21. They have sheets of brood coming on, but food seems scarce, and all hives are dull and listless, and do not seem to care for syrup as before. Yet there are multitudes of bees, and they require room in supers, where work seems slowly beginning. The wind has been persistently north-east, with sunshine on most days. For twelve years past I have never noticed this trouble before. Until this winter they were all on grass; but I have arranged a cinder floor instead this year. Can this have anything to do with it?—R. L. M., Isle of Wight, June 11.

Reply. —Your bees have been suffering from paralysis (Maikrankheit of Continental bee-keepers), which sometimes appears in spring, when some days of fine warm weather are followed by cold and damp. Abdominal distension ensues, and many of the bees die; but brood is not affected; and generally with the advent of warm weather the colonies slowly recover.

[3458.] *Dwindling Hive.*—1. One of my hives dwindled down last autumn to almost nothing. I added a fresh stock to it late in the autumn, but the bees do not seem to be working properly. From the beginning of the season up to date they have only pulled out one bar-frame of Weed foundation. I examined the hive to-day. The five old bar-frames, which were filled last season with comb, were covered with bees. The queen was there and about half-a-dozen drones on each frame. I send you a bit of the new comb for inspection. Can you help me with any suggestions? 2. I also found several white maggots or caterpillars with brown heads on the tops of the frames and on the floor board of the hive. One of these I send in a piece of blue paper. I enclose name for reference and sign—W. S. H., Hereford, June 8.

Reply.—1. There is nothing but pollen in the comb sent. If your bees cover only five frames now they must be in a weak condition. They no doubt dwindled in the autumn through loss of their queen, and, consequently, failure to raise brood. The stock you added was probably not large enough, and did not contain a sufficient number of young bees to pass through the winter. For this reason there were not bees enough to commence brood-raising early. Bees ought to well fill a ten-frame hive, and have supers on by this time. 2. The maggot you send is the larva of the

wax-moth, frequently found in weak hives. Put your five frames of bees into a clean hive and place an empty comb on each side, close in with division-board, and gradually give room as the colony increases in size. Hives must be strong to keep away wax-moth.

[3459.] *Treatment of Infected Hives.*—Will you kindly tell me if sample of comb No. 54 sent is affected with foul brood? The hive it came from is a new one, made by myself, and contained a queen of last year, also new combs, and was very strong in bees. I was about to super them when I noticed what, according to "Guide Book," I thought was foul brood. I have seven other stocks apparently healthy, very strong and all supered. In view of this fact, I have sulphured the diseased lot and closed the hive tight. Have I done right? Should I burn combs, etc., as per "Guide Book"? I am a regular reader of both journals, and have been four or five years. I find much that is useful to me at all seasons of the year. Thanking you for an early reply, I enclose name and sign—ENQUIRER, Westbourne, June 8.

REPLY.—You were quite right in diagnosing foul brood, and in destroying the bees you have certainly adopted drastic measures for ridding yourself of the disease. The combs are no use, and should be burnt. So should also the frames and quilts. The hive and floor-board should be disinfected by being steamed or scrubbed with boiling water and soap, and then painted over with a solution of carbolic acid, as directed in "Guide Book."

[3460.] *Working for Late Honey.*—I should be very pleased if you could publish the information I require. I am living in a district that has many lime trees and heather, so that I have a long honey season. 1. I should like to know which is the better plan: Super early and run the risk of later swarming, or get the swarming over and super afterwards? I am not wishing for an increase of stocks, and am wondering if by keeping the bees busy foundation building I can prevent them swarming. 2. This season I have been very much troubled with wax-moth, and I should be glad to know which would be the best way to use naphthaline without causing any inconvenience to the bees. Thanking you in anticipation, I enclose card and sign myself—R. F. P., Wokingham, June 9.

REPLY.—Your best plan will be to super early, and to prevent swarming give room in the hive and supers in advance of the requirements of the colony. You can also remove comb containing brood and substitute frames of comb foundation. Another plan, provided you are working for extracted honey, is to place a hive containing frames of empty comb or comb-foundation on the top of the colony, and even adding another on the top if more room is needed. Be careful to give plenty of ventilation. (See p. 59 of "Guide Book.") 2. Two balls of naphthaline split in half can be placed on floor-board, and powdered naphthaline can be sprinkled between the quilts. The best way to keep moth away is to have the hives strong in bees, and then it has small chance of effecting an entrance. Give the bees clean hives and floor-boards, and scrape any crevices in frames where eggs of wax-moth may be deposited.

[3461.] *Starved Bees.*—Would you be so good as to tell me through your columns whether the enclosed piece of comb points to foul brood or any other disease that would account for the death of the whole of the bees in the bar-frame hive from which it was taken? The bees in this hive, and also in two straw skeps alongside it, died about six weeks ago. They belonged to a working man who has kept bees for some years, but who has apparently never really studied them at all. He assured me that he had fed them well, but I am inclined to doubt this, as there was not a trace of any food stored in the ten frames of the hive from which this sample was taken. I have myself just begun with a couple of hives, and am greatly interested in what little I have yet seen of the bees and what I have read in the "Guide Book." There are two or three things in the latter that I do not yet grasp, but hope that by the time I have gone through the book again these points may be clearer to me. I enclose name and address and sign—T. E. L., Rumbling Bridge, June 7.

REPLY.—The comb sent is perfectly healthy and beautifully clean, and there is no doubt but that the bees died of starvation, for there was not a particle of honey in the comb. It is evident the owner did not feed the bees sufficiently.

[3462.] *Non-Swarming Hives.*—I. Early in May I purchased a stock of bees and put them in a non-swarming hive. Later on in the month, finding the bees hanging about, I put frames of foundation in the non-swarming chamber; but on examination the following week, finding they had not built out any of the wax and that the withdrawing and replacing the non-swarming chamber crushed so many bees, I removed the frames to a super and left the lower chamber empty. I now find that, besides building out the frames above, they have built combs in the non-swarming chamber dependent from the bottom of the frames in brood-chamber, and already have a large quantity of brood in the new combs. In fact, they appear to have prac-

tically left the brood-chamber. What had I better do? 2. I wish to become a member of the B.B.K.A. Will you kindly tell me the form of procedure and where to make my application? Thanking you in advance for your advice, I enclose name for reference.—PUZZLED, Caterham, June 10.

REPLY.—1. You did wrong in leaving the bees access to lower chamber when you removed the frames to a super above. Drive as many of the bees as you can with smoke or otherwise into the body-box and cut out the combs. Any containing brood can be tied into frames and placed in body-box to hatch out, and when this takes place they can be removed. 2. Mr. E. H. Young, 12, Hanover Square, London, W., is the secretary of the B.B.K.A., and will give you the information you require.

REVIEWS OF FOREIGN JOURNALS.

By "Nemo."

In the *Australian Bee Bulletin*, F. W. Penberthy says ruberoid is the best for quilts he has ever tried, watertight under leaky covers, if you have any, and does not rot. Bees do not nibble it, and it is only about half the price of oilcloth, and one ply is plenty thick enough. Ruberoid paper will not do, as the bees will nibble through it.

At the third International Congress of Bee-keepers in Holland, a paper on the instinct and intelligence of bees, by M. Kojevnikoff, from Russia, was read. The question propounded was: "Is the bee endowed with intelligence, or is it only a marvellous instinct that directs her actions?" The author says nothing is more common than to hear about the intelligence of bees compared with that of man, about their social life being so well ordered that men even could take them as examples for their virtues, diligence, their devotion to their queen, even to sacrificing their lives for her sake, and the general good. All this does not prevent the author from concluding that it is due more to instinct than intelligence. True intelligence, he says, is a complete consciousness of causes, relations between cause and effect produced, as well as the method and object. This is not seen in the bee. Since she has been known she has not been seen to enlarge the small circle of action traced by Providence. Without change, there are the same structures, the same family life, for colonies are only families. The author has come to the conclusion that bees possess: (1) Well-fixed automatic hereditary instincts; (2) other hereditary instincts, less fixed, and capable of being changed according to circumstances and information imparted by the organs of sense.

The *Practischer Wegweiser* says it often happens that the proprietor of a prosperous apiary dies of old age and the wife finds herself in a difficult position. Had she been used to the management of an apiary she could at any rate wait for a suitable moment to sell the bees without risk of loss; but not knowing what to do with these poor creatures, she generally lets them go at a price very much below their real value, simply to be rid of them. For this reason bee-keepers should do all they possibly can to interest their wives and children in bees. Let them help, and they will soon get the taste for it and will derive pleasure in sharing the work, and will one day be thankful for having had the opportunity.

Echoes from the Hives.

Alderley Edge, Cheshire.—Heard tell of white clover in bloom June 8, Alderley Edge district; plucked some myself June 10 near Wilmslow. Stocks in fairly good condition for honey flow, but find brood combs greatly clogged with pollen.—J WADDELL, C.B.K.A. Expert.

BEES IN A LETTER-BOX.

A swarm of bees about a mile out of Newton Abbot made for a public-house. From lack of intimate knowledge, however, or other obstacle, they failed to find an entrance, and so settled in a corner by the wall outside. At Chudleigh, however, the tastes of the bees are different. It may be that they study politics, and have heard talk of the Government providing houses for the working-classes, for they took advantage of the friendly shade in the interior of a letter-box.—(Communicated.)

PRESS CUTTING

LONDON HONEY.

"Not so nice as heather honey, of course, but very good for London," says a friend as he critically points out to you the result of his bee-keeping in a London garden. Just one hive he has. His bees go far afield to gather their sweets, and at the end of the summer have given him between 30 and 40 lb. of honey. The expert bee-keeper may laugh at the amount, but it seems wonderful to those of us who are proud of the mellow bass with which our gardens resound from the chorus of the bees next door. High into the air the insects rise, take their bearings, and are off. Perhaps while this note is printing they are stealing honey from the flower-sellers in the Strand. They will be safe home this evening, taking a straighter line for their home beneath an

apple-tree than any homing pigeon for its loft. Only you must not move the hive. Your bee will come five miles to its home and go straight to bed like a good child; but shift his hive but a dozen feet and all his landmarks are jumbled. He might as well be sent pioneering into Africa.—*St. James's Gazette.*

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 21 to 25, at Park Royal, London.—Royal Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A. Increased prizes for B.K.A. Associations as arranged in divisions or groups of counties. Schedules from Edwin H. Young, Secretary, 12, Hanover-square, W. **Entries closed.**

July 14 and 15, at Grimsby.—Show of Honey, Hives, and Bee Appliances in connection with the Lincolnshire Agricultural Society. Bee Department under the management of the Lincs. B.K.A. Fourteen classes. Liberal money prizes and silver medals. Schedules from R. Godson, Hon. Sec. Lincs. B.K.A., Tothill, Alford, Lincs. **Entries closed.**

July 27, at Henbury, near Bristol.—Annual Show of the Henbury District Bee-keepers' Association in connection with the Horticultural Society's Exhibition. Several open classes with good prizes (two classes with free entry). Schedules from the Hon. Sec., J. Atkin Waller, Pen Park, Westbury-on-Trym, near Bristol. **Entries close July 22.**

July 27 and 28, at Cardiff.—Glamorgan B.K.A. Show of Honey and Appliances in connection with the Cardiff and County Horticultural Society's Exhibition in the Sophia Gardens, Cardiff. Seven open classes for Sections, Extracted Honey, Beeswax, and Honey-comb Designs, also for Hives, Collections of Appliances, and Observatory Hives. Schedules from Wm. Richards, Hon. Sec., Glam. B.K.A., Gabalfa, Cardiff. **Entries close July 21.**

July 29, 30, and August 1 and 2, at Southport.—Annual Show of the Royal Lancashire Agricultural Society. Liberal money-prizes are offered for honey along with silver and bronze medals of the B.K.A. and also of the Society. Open classes for Honey-Trophy. Sections, Extracted Honey, Beeswax, Honey-Confectionery, Bee Flowers, Instructive Exhibits in Bee-Culture, &c. Schedules from Edward Bohane, Secretary, Miller-arcade, Preston. **Entries close June 29.**

August 1 (Bank Holiday), Windsor District Berks, B.K.A.—Annual Show of Honey and Bee-Appliances in conjunction with the Clewer Horticultural Society, in the grounds of Clewer Manor (by permission of E. B. Foster, Esq., J.P., C.C.). Open classes for Observatory Hive, Twelve 1-lb. Sections, and Twelve 1-lb Jars Extracted Honey. Also classes for Berks only, and for Windsor District only. Schedules from W. S. Darby, Hon. Sec., Consort Villas, Clewer. **Entries close July 23.**

August 4, at Kingsthorpe, Northants.—Honey Show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar of honey. (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Hon. Sec., Kingsthorpe, Northampton. **Entries close August 1.**

August 10, at Wye.—Kent Honey Show.—Several classes for Extracted and Comb Honey, Trophy, Wax, Mead, Cakes, &c., &c. Liberal cash prizes and silver medals. Open Classes for Single 1-lb Jar Extracted Honey (Light); Ditto (Dark); Single 1-lb. Section, with prizes of 20s., 10s., and 5s. in each class. Bee Demonstrations, Horticultural Show, Cycle Sports, &c. **Entries close August 5.** Schedules from J. Tippen, Secretary, Wye, Ashford, Kent.

August 24, at Fleetwood.—Honey Show in connection with Fleetwood Floral and Horticultural Society. Open classes for Six 1-lb. Sections. Six 1-lb. Jars Light Extracted Honey, and Six 1-lb. Jars Dark Extracted Honey. Schedules from Edward Cook, Hon. Sec., Rossall Grange Farm, Fleetwood. **Entries close August 14.**

August 24, at Sandbach.—Honey Department of the Cheshire Agricultural Society's Show, under the management of the Cheshire B.K.A. Open classes for Hives, Sections, and Extracted Honey. Substantial prizes. Bee Lectures and Demonstrations on the show-ground. Schedules from T. A. Beckett, St. Werburgh's Chambers, Chester. **Entries close August 3 (at double fees August 10).**

August 24 and 25, at Leamington.—Annual Show of the Warwickshire B.K.A. in connection with that of the Warwickshire Agricultural Society. Schedules from James Noble Bower, Hon. Sec., Warwickshire B.K.A., Knowle.

August 25, at Llangollen.—In connection with the Sixth Annual Flower Show. Open classes for Six 1-lb. Sections, Six Jars Extracted Honey, and Beeswax. Schedules from Frank Little, **Brook Bank**, Llangollen. **Entries close August 11.**

August 30, at Cartmel, Lancashire.—Honey show in connection with the 32nd Annual Show of the Cartmel Agricultural Society. Three open classes for Comb and Extracted Honey (prizes, 15s., 10s., 5s., and 2s. 6d.), and Beeswax (prizes, 10s. and 5s.), along with silver and bronze medals of the Lancs B.K.A. Schedules from W. Cragg, Secretary, Cartmel, viâ Carnforth. **Entries close August 18.**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

*** Referring to Query 3436 (page 214), Mr. D. H. Durrant, Hope Cottage, Petersfield, Hants, writes as under: "If your correspondent, 'G. M. K., London,' will communicate with me, I may be able to afford the information he asks for."

W. H. (West Melton).—Skeps vary so much in size that it is impossible to say how much one will hold. We have known them to contain from 30 lb. to 60 lb. of honey.

ALPHA (Andover).—The bees have died of starvation, although there is plenty of honey in the combs. This, however, is granulated and useless to the bees, and the uncapped cells show that they have sucked out all the liquid part. The old combs are mouldy from damp, and therefore useless, but the honey in the new combs could be liquefied and used for feeding bees.

SECTION (Tring). — The honey sent is of good consistency and colour, and although of strong flavour, is a fair sample of early honey. It would suit some tastes, but might be considered strong by others.

G. H. B. (Bowers Park).—The queen sent is a young one; but there was no sting

adhering to her when she reached us, and only the tongue protruding. There is no indication of her having been stung.

G. L. H. (Westmeath).—Your best plan is to unite the two lots and make one strong colony of them.

CÆSAREA (Jersey).—We are always pleased to answer questions within reasonable limits, as the three thousand odd already answered prove; but scurrilous and insulting letters, such as the one you send, find their proper place in the wastepaper basket.

AMATEUR BEE-KEEPER (Cheltenham).—1. From 100 to 300, according to the methods he adopts. 2. You can keep them in nuclei until suited.

J. CHIP (Bulphan).—*Bee Nomenclature*—Bees sent were smashed flat in box, as all specimens usually are when enclosed in envelope unprotected. We can see no trace of Carniolan markings in remains of bees owing to the damaged condition when received.

J. M. (Devonport).—The queen sent is a young one, and we cannot account for her being on the ground.

Suspected Combs.

W. S. B. (Blackpool).—There is no foul-brood, but the piece of comb shows bees died of starvation, many of them in the cells. The discoloration of the comb is due to its being old, and also to fermentation of dead bees. There are several chrysalids of some insect in some of the cells.

ST. LEONARD (Devon).—It is impossible to say for certain what causes some of the bees to die in the cells; but the pieces of comb sent do not at present contain foul-brood. There is no ropiness which is present in foul-brood. The disagreeable smell is not always emitted. You have done quite right, and we would advise you to watch the colony, and if symptoms change report again.

L. J. (Chislehurst).—Of the two samples sent we find in the old comb one cell containing foul-brood of old standing. The newer piece—the cells of which contain dead larvæ — shows the disease rapidly developing, and we advise prompt destruction of hive contents as the best course under the circumstances.

C. E. W. (Isle of Man).—Comb sent shows a decided case of foul brood.

E. W. (Tavistock).—There is foul-brood in comb sent.

G. J. R. (Wilts).—The piece of comb contains diseased brood.

J. M. (Hailsham). — Both samples show foul-brood.

C. W. O. (Market Harborough).—The comb sent contains chilled brood, and if there is much of it in the hive it should be removed.

NOVICE (Devon).—There is foul brood in some of the cells of comb sent.

H. B. B. (Kent).—There is foul-brood in sample, and the disease is in the advanced stage—not a recent outbreak as supposed. It should be dealt with as directed in "Guide Book."

Special Prepaid Advertisements.

Twelve words and under; Sixpence; for every additional Three words or under, One Penny

Advertisements for current issue must be received by first post on Tuesday.

CROSSBRED COLLIE SETTER, 3 years' excellent guard, used to children, Exchange HIVE of BEES, Eastcourt House, Burbage, Wilts. B 49

STRONG HEALTHY NATURAL SWARMS, 12s 6d., including Skeps. Guaranteed safe arrival. CADMAN, Codsallwood. B 47

WANTED, cheap for cash, "COWAN" EXTRACTOR or EXTRACTOR with "Cowan" Gearing. SOUTHBANK, Gildown, Guildford. B 44

WANTED TWO SWARMS, Exchange GUINEA EXTRACTOR, with Gearing. W. WILLIAMS, Boot Maker, St. Briavels. B 43

FOR SALE, FIVE STRONG HEALTHY STOCKS in Bar-Frame Hives, six Stocks in Skeps, Honey Extractor, Ripener and other utensils, £12 the lot. T. COOPER, The Vale, Winchfield, Hants. B 42

STRONG HEALTHY JUNE SWARMS, 8s. each, or 2s. 3d. lb. Cash with order. WHITTING, Manea. B 41

WANTED, HEALTHY BEES or HONEY, in Exchange for New "W.B.C." HIVES. WATSON, Windmill Cottage, Potternewton Lane, Leeds. B 48

YOUNG PROLIFIC QUEENS, 3s. each, selected, 3s. 6d. Five Swarms, ready now, 10s each, boxes (returnable), 1s. extra. Tollington, Woodbine Apiary, Hathern, Loughboro'. B 45

SIMMINS' "DOLLAR HONEY QUEENS," 4s. 2d. post free. Address, Broomham, Heathfield, Sussex.

SWARMS, 10s. 6d., 12s. 6d., 15s., BEES. HALL, Post Office Little Aston-road, Birmingham. B 40

THREE WELL-MADE HIVES, FRAMES, &c., FOR SALE CHEAP. Guaranteed healthy. HEAP, Cross Gates, Leeds. B 39

WANTED, SWARM or STOCK, with Young Queen, in Exchange for KILTO HAND CAMERA, to carry 12 ¼ plates, with all accessories, cost new 35s., good working order. Cabbage Plants, 10d. 100, or 3s. 6d. 1,000. HICKLING, Old Toll House, Ripple Side, Barking, E. B 51

WANTED, OFFERS in BEES, Stocks on Standard Frames, or Strong Swarms, in Exchange for a FRENA MEMO HAND CAMERA and Magnifiers as new. GEORGE PARKER, Aldergrove House, Porth, Glam. B 46

FOR SALE, HONEY in Sections. 1-lb. Screw Cap Jars and 28-lb. Tins. H. J. WISBEY, Whittlesford Mill, Cambs. B 50

EXCHANGE, PAIR of PRIZE BRED DUTCH RABBITS (winners) for SWARM of BEES. J. REAVELEY, Starbeck. B 53

COWAN EXTRACTOR, bicycle chain gearing. £2 10s. From Taylor, Welwyn, this March, unused, unsoiled, absolutely perfect, not required. Cash, or Exchange Honey. Must be first quality. Offers to C. LEAL, Bayle Poultry Farm, Ltd., Cornwall. B 52

BUY from the Largest and Cheapest Depot in the South. Large healthy Swarms, 15s. each; Stocks on Standard Frames, 15s. and 20s.; Wells Hives, soiled, 12s. 6d. each. cost 35s.; Guinea New Hives for 15s.; 30s. Wells Hives (New) for 20s.; Nucleuses, 3s. 6d.; best American (dovetailed) Standard and Shallow Frames, 6s.; 100 Excluders, 6d. each; Best Slotted Metal Dividers, 5s. 6d. 100; Plain Metal 4s. Regulating Feeders, 1s. each; Section Travelling Crates for one dozen, 1s. 9d. (two dozen, 2s. 6d.); Super Clearers, 1s. 3d.; Quilts, 4d.; Best Split Sections, 2s. 100. Few Stocks Bees in Skeps, 10s. each. Standard and Shallow Frame Supers, 1s. and 1s. 6d. each. Wide Metal Ends, 3s. 6d. gross. Terms cash. Scores of testimonials received. G. SPEARMAN, Colesbourne, Cheltenham. B 54

Editorial, Notices, &c.

BRITISH BEE KEEPERS' ASSOCIATION

The monthly meeting of the Council was held on Wednesday, the 15th inst., at 105, Jermyn Street, S.W., Mr. T. W. Cowan occupying the chair.

There were also present: General Sir Stanley Edwardes, Dr. T. S. Elliot, Messrs. R. T. Andrews, T. Bevan, F. J. Cribb, J. B. Lamb, E. Oetzmann, W. F. Reid, F. B. White, and the Secretary. Letters were read from Miss Gayton, Colonel Walker, W. Broughton Carr, R. Godson, H. Jonas, W. Richards, E. Walker, and T. I. Weston, regretting inability to attend the meeting.

The minutes of the previous meeting were read and confirmed.

The following new members were elected, viz.:—Rev. A. C. Dodard, the Presbytery, Marnhull, Dorset; Mr. Percy Kemp, Norton Kirby, Kent; Mrs. Martin, White Roding, Dunmow, Essex; Mr. A. D. Matthews, Sawbridgeworth, Herts; Mr. E. H. Pankhurst, Ham House, Meopham, near Gravesend; Mr. George Mason, Rottingdean, Brighton.

Dr. Elliot presented the Finance Committee's report and list of cheques recommended by the Committee. This report was duly approved.

The Examiners' Report upon result of the recent First Class Examination was received, and, in accordance with the recommendations, it was resolved to grant diplomas to the following candidates, viz.:—Dr. Walpole Simmons, Mr. William Richards, and Mr. J. W. Brewer.

Nominations and appointments of Judges and Examiners were made in accordance with requirements of a number of county societies, viz:—Kent, Lincolnshire, Middlesex, Staffordshire, Surrey, Warwickshire, and Yorkshire.

Letters from Colonel Walker, the Lancashire Association, Lincolnshire Association, and others on the subject of foul brood legislation were read to the meeting. A long discussion ensued, in which Dr. Elliot, the Chairman, Messrs. E. J. Cribb, W. F. Reid, J. B. Lamb, F. B. White, E. Oetzmann, and others took part. It was eventually unanimously resolved that "the Secretary be instructed to ask all county associations to apply to their respective county councils asking whether an Act to stamp out foul brood would be supported if it were obtained."

It was further decided to convene a meeting of delegates of county associations, to be held in London on Thursday, October 6, to decide upon the steps to be taken to further the wishes of bee-keepers and the county councils.

The next meeting of the Council will take place on Wednesday, July 20.

BOARD OF AGRICULTURE.

BRITISH FRUIT CULTURE.

The Departmental Committee appointed by the Earl of Onslow, President of the Board of Agriculture, to inquire into and report upon the fruit industry of Great Britain held sittings on the 16th and 17th insts. The following members were present:—Mr. A. S. T. Griffith-Boscawen, M.P. (Chairman), Mr. C. W. Radcliffe-Cooke, M.P., Mr. G. Monro, Mr. P. Spencer Pickering, M.A., F.R.S., Dr. W. Somerville, Mr. E. Vinson, and Mr. Ernest Garnsey (Secretary). Among those giving evidence was Mr. T. W. Cowan, F.L.S. (Chairman Council B.B.K.A.). The following are some of the points referred to in Mr. Cowan's evidence:—

One of the drawbacks to fruit growing in this country is the unfruitfulness of trees. They may bear an abundance of blossom, but few fruit set.

The failure to set fruit—in some cases an advantage, as it saves thinning—if general, demands attention.

The causes may be (a) vigorous wood growth, (b) unhealthy condition and lack of vigour, (c) fungus attacks on the blossom, (d) frosts, (e) bad weather during flowering season, and (f) insufficient bees to fertilise the blossoms.

Rain during blooming season is a frequent cause of unfruitfulness, as it not only washes away the pollen, but insects—particularly bees—which promote cross fertilisation are not able to visit the blossoms.

Trees planted in blocks are often self-sterile, and are unable to set fruit when planted alone, but will become fruitful if other varieties are near them.

Causes producing self-sterility are (a) that the pollen of a variety is unable to fertilise the pistils of that same variety, and (b) the stamens and pistils may not mature at the same time.

Where fruit is grown for home use or in small areas for home markets and a number of varieties mixed, there is no serious loss from imperfect fertilisation, but in large commercial orchards, where whole blocks of one variety are planted, general unfruitfulness may cause serious loss.

Pollenisers should therefore be selected having (a) simultaneous blooming and (b) natural affinity.

Fruit is improved by cross-fertilisation.

Some varieties produce more pollen than others, and fewer of such trees will be needed.

The number of trees depends upon whether they have any value in themselves.

In California, where the most favourable weather conditions exist, fruit growers plant every tenth row with pollenisers, but in other parts of the States orchardists generally plant every third row for pears, apples, cherries, and plums.

Although pollen may be in some instances carried by wind, the larger number of plants depend upon insects—such as bees, wasps, and flies—to bring about fertilisation.

Few, if any, wild bees can live in a large, well-cultivated orchard, and as thoroughness of cultivation increases, these natural aids to cross-fertilisation decrease. We can, therefore, only depend on our domestic honey bee for this purpose.

In spring, when fruit trees are in bloom, there are twenty bees flying and visiting blossoms to one of any other kind of insect.

Fruit growers should be encouraged to cultivate the honey bee for fertilising the blossoms.

Unproductive orchards have set an abundance of fruit after establishing an apiary.

Lecturers and experts are needed to impart more knowledge, both as to management of orchards and cultivating bees for fertilising fruit blossoms.

ROYAL COUNTIES' AGRICULTURAL SOCIETY.

BEE AND HONEY SHOW AT GUILDFORD.

The annual show of the above society was held at Guildford on June 7. Among the visitors to the show was the Alake of Abeokuta, who evinced much interest in all departments of the exhibition. After inspecting the poultry show, the bee tent adjoining soon engaged his earnest attention, and here his highness was presented with some honey by Mr. F. B. White (hon. secretary to the Surrey Bee-keepers' Association). By special request of the Alake a demonstration of driving bees was given, and he would not rest content until he had gone inside the tent where this operation was in progress.

The Bee Department was under the management of the Surrey Bee-keepers' Association, of which Mr. F. B. White is hon. secretary. As usual these exhibits attracted considerable attention. The show was an exceedingly good one considering how early it is in the season, and the fact that the last fortnight has been by no means "bee weather." There were ninety-seven entries, which must be regarded as highly satisfactory. At intervals on each day Mr. C. T. Overton, of Crawley, gave lectures on the bees, and their management generally. The judge was Mr. A. J. Carter, Billingshurst, who made the following awards:—

Collection of Hives and Appliances.—1st, E. H. Taylor, Welwyn, Herts; 2nd, C. T. Overton, Crawley; h.c., C. L. Greenhill, Wimbledon.

Observatory Hives with Bees and Queen.—1st, A. E. C. Mumford, Redhill; 2nd, C. L. Greenhill; c., E. H. Taylor.

Frame-Hive for General Use.—1st, A. E. C. Mumford; 2nd, E. H. Taylor; c., C. T. Overton.

Most Suitable Outfit for Beginner in Bee-keeping.—1st, E. H. Taylor; 2nd, C. L. Greenhill; h.c., C. T. Overton; c., A. E. C. Mumford.

Six One-pound Sections, Gathered During 1903 or 1904.—1st, W. Woodley, Beedon, Newbury; 2nd, C. Lodge, Chelmsford; 3rd, Rev. A. H. Headley, The Rectory, Alresford.

Three Shallow Frames Comb-Honey, Gathered 1903 or 1904.—1st, F. R. Court, Sittingbourne, Kent.

Six One-pound Jars Extracted Honey, Gathered 1903 or 1904.—1st, W. J. Cook, Market Rasen; 2nd, C. Lodge; 3rd, W. Woodley; c., E. C. R. White, Newton Toney, Salisbury.

Six One-pound Jars Granulated Honey.—1st, W. Woodley; 2nd, E. C. R. White; 3rd, C. Lodge; h.c., M. J. Lamboll, Chiddingfold; c., A. Brightwell, East Liss.

Display of Bee Products.—1st, F. B. White, Redhill.

Beeswax.—1st, Richard Dutton, Witham, Essex; 2nd, C. Lodge; 3, A. H. Miller, Egham; h.c., A. G. Preen, Shrewsbury; c., E. C. R. White; c., F. R. Court.

In the classes for useful invention; educational exhibit, and for comb-honey gathered during 1904, no awards were made.

LOCAL CLASSES.

Six One-pound Sections (Any Year).—1st, E. P. Betts, Camberley; 2nd, J. W. Lewis, Farnham; 3rd, Archibald Seth-Smith, Cobham; c., D. H. Welsh, Reigate.

Three Shallow Frames Gathered During 1903 or 1904.—1st, T. H. E. Watts-Sylvester, Surbiton.

Six One-pound Jars Extracted Honey, Gathered During 1903 or 1904.—1st, H. W. Ketcher, Cranleigh; 2nd, A. E. C. Mumford; 3rd, A. H. Miller; c., W. Welch, Cranleigh.

Six One-pound Jars of Heather Honey (Any Year).—1st, E. P. Betts; 2nd, J. F. Herdwell, Yorktown; 3, Archibald Seth-Smith; h.c., Joseph Sharland, Haslemere.

One Shallow Frame of Comb Honey. Gathered During 1904.—2nd, Mrs. N. F. M. Marson, Buckland, Betchworth.

Display of Bee Products.—1st, F. B. White.

Beeswax.—1, A. E. C. Mumford; 2nd, John Davis, Cranleigh; 3rd. John Kachler, Croydon; h.c., A. H. Miller.

Frame-Hive Made by Amateur.—1st and h.c., W. A. Dawson, Cobham; 2nd, F. J. Bernau, Reigate.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "THE EDITORS of the 'British Bee Journal,' 10, *Buckingham-street, Strand, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 10, *Buckingham-street, Strand, London, W.C.*"

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

PIPING AND OTHER SWARMING SYMPTOMS.

[5549.] The *rationale* of piping is a simple one. The first swarm issues with the old queen, generally about the period when the earliest of the series of queen-cells are sealed over by the bees—although the rule is not quite an inviolable one. About a week after this event the oldest princess eats her way out, and becomes the heir-apparent. But from the very moment of her birth a fear seems to haunt her, because, from some innate source, she has a knowledge that there are rival claimants, one of whom may turn usurper, and depose her from her seat of sovereignty before the full glory of her reign has begun. So, as the contents of the successive cells approach fruition, and the infant princess is about ready to emerge, she would fain tear them down and thus end all rivalry, but the bees jealously guard them. Indignant at her spirit of impotence she utters her war-cry, a shrill piping sound, sharp or wailing, to which the imprisoned nymph replies in a close, muffled, hoarse tone. As a rule, this goes on most persistently for over three days and nights, increasing from an indistinct to a clearer, louder, and more constant recitative strain. The notes of the liberated princess have a distinct intonation, and are always a prelude to after-swarming, for without their being first heard it is safe to say such swarms never issue. Generally, these casts leave the hive from the ninth day after the prime swarm, but at times they do not appear before a fortnight, and in extreme cases, even the twentieth day may arrive before they emerge. Even at this late date the usual course of piping proceeds for the average time before the issue of the second swarm; but, once heard, the cast may be looked for, even although the weather is not quite propitious, as these young virgins are either confident or thoughtless, and are not so dependent on bright sunshine or even on mild fine days as the first swarm headed by the old queen. Yet weather may delay second swarming, and it is a well-known fact that bees can retard the hatching of young virgins by various devices, such as laying on additional coatings of wax at the point of the cell where the prisoner would make her exit. The period of issue, besides being prolonged may also be expedited at times, and authentic instances have been cited of after-swarms coming out two or three days after the prime one. But the almost invariable rule is that first swarms issue when cells are sealed over, and second ones follow in about nine days; and whenever piping is heard it may be looked for in about three days thereafter. At times these signs manifest themselves without a prime swarm having issued, but these occasions are rare. They may indeed be considered abnormal, unless in very bad seasons, such as the last two years, when they were fairly common. Then a set of circumstances may arise somewhat analogous to first swarming, because for some reason, best known to themselves, they have deposed and ejected their original queen, and so the usual sequel follows. If the hive now swarms it is really a cast, headed by a young queen as yet unmated, and they leave all the foundations behind necessary for producing a second cast in the usual course. Several instances of this came to my notice during the past two years, and their owners were rather nonplussed at the unusual occurrence.

Some Swarming Symptoms.—In the case of prime swarming, no precise or definite manifestations reveal themselves so distinctly that they may be set down as wholly reliable guides. I wish there were, for it would save the loss of many a fine swarm. Still a few points may be noted pointing in this direction. 1. Clustering or bunching about the entrance or flight-board is not a reliable index, but rather shows that the bees are congested and waiting for something to happen to relieve the internal pressure. Viewed, however, in conjunction with other points, it may be taken as indicating preparations for the meditated departure. 2. An unusual number of young bees sporting themselves to an unwonted degree in front of the hive in the early part of the day would lead me to keep a wary eye on that hive for a day or two. When they "reel" Robert Maxwell considered they were not far from the period of departure. 3.

In the forenoon if I find a large number of workers inactive, with fewer than usual carrying in honey and pollen, I would presume that they are busy inside filling their honey sacs with a supply for starting them in their new habitation. There is then often an unusual silence—the calm before the storm—which I would diagnose as likely to be a presage of swarming that day. 4. In the old straw skep the appearance of drones in any large numbers was set down as a forecast, and they looked for swarms in about ten days thereafter. Although the old order has changed, still there is something in the idea. 5. In frame-hives, a peep into the interior will tell us pretty nearly when to expect a swarm, if we can see preparations being made in the way of queen-cells. But even here, the precise date can only be approximated, for it will be found that bees swarm (a) soon after cells of embryo queens are sealed over; (b) almost as soon as they are in rudimentary formation; or (c) not till the young queen has actually issued. The first may, however, be set down as the general rule.—D. M. M., Banff.

IRISH SEASONABLE NOTES.

[5550.] The weather here in Dublin has been very propitious for some considerable time past, and, happily, there is every promise of its continuance. We have had only two wet days during the last three weeks.

I have had four racks on one stock now for over a week, the fourth having been placed under the other three on June 4. This was no easy task, either, the weight of the partially filled supers, with their complement of thousands of bees, requiring great effort merely to lift them. The "window" in the bottom crate soon showed the bees in hard-working clusters on the foundation, and as the top super is almost ready for removal and the other two well advanced, I do not think it premature to term this an ideally prosperous colony. (N.B.—The queen is a last year's one.)

I do not know to what extent celluloid covers to crates are used in England, but, certainly, one seldom sees any mention of them, either good or bad. I am using one at present on the above-mentioned stock, and, undoubtedly, it is an assistance in enabling one to gauge at a glance the condition of the super. It has its disadvantages, however, the chief of which probably is its everlasting liability to buckle. This allows the bees at times to work their way between super and cover, and it is difficult to clear them out without crushing them. I would also be inclined to think that it hinders ventilation once the bees propolise it down.

This season I have used for the first time a queen-excluder (celluloid) under supers on a hive which last season spoilt about a dozen sections with both worker and drone brood. I have not the least doubt it is hindering the bees in their labours, as they were much longer than usual taking to the first super, and apparently sulking, and saying to themselves and to each other, "For two pins we wouldn't go up into it at all."

There have been remarkably few bees at the drinking-trough this year. On fine, bright days, with honey coming in well, there was rarely a bee to be seen at the old spot. How is this? I always thought that the incoming of nectar and water-drinking by the bees were closely allied, and that the number and frequency of their visits to the water were a criterion, at least approximately, of the quantity of honey being stored. It has not been so this year.

How bees do hate parsley! The head gardener came to me one day a fortnight or so ago and exhibited a swollen hand, the result of a bee attack when he was passing a hive. I was much astonished, as my bees are exceedingly quiet as a rule, and there had been nothing to disturb them. Trying to think out the cause, I suddenly remembered how some years ago the bees had acted when some parsley (which at that time, before the antipathy was discovered, was grown not far from the hives) was being cut. I sought the swollen one out, and asked him if he had been doing anything to the parsley before he was stung. He is a worthy Scotsman, and midst the "kailyard" I gleaned that he *had* been working at the parsley. "There's the mystery explained," said I (or words to that effect), "and remember in future that as a red rag to a bull, so is parsley to a bee; and when returning from a parsley-cutting expedition to the conservatory, take the long-sea route. It is a saving in the end."—H. V. F., Dublin, June 13.

FOUL BROOD LEGISLATION.

[5551.] In reference to your remark on page 222 that, so far as you were aware, only one association had signified a desire for foul brood legislation, I should like to say that the B.B.K.A. were informed in March, 1903, "that the Committee (of the Worcestershire Bee-keepers' Association) were of opinion that renewed efforts should be made to obtain compulsory powers in dealing with foul brood."

I much regret that the Council of the B.B.K.A. have not taken action in the matter.—John P. Phillips, Hon. Sec. Worcestershire B.K.A.

[5552.] I am instructed by my committee to write you in reference to p. 222 in B.B.J. of June 9, in editorial remarks after Derby B.K.A. special meeting, as to county associations *re* foul brood legislation: That we, the Committee of the Lancashire Bee-keepers' Association, met at Preston, on June 11, 1904, assure the B.B.K.A. of our earnest desire that the B.B.K.A. should make every effort possible to secure the passing of such legislation at the earliest date.—J. F. WILLIAMSON, Secretary, Lancashire B.K.A.

BEE-KEEPING IN PETRUSBERG, O.R.C.

[5553.] During the late war, when serving as a volunteer in General Rundle's Mounted Infantry, I trekked through the greater part of the O.R.C., and though not observing at that time with the eye of an apiarian the nature and suitability of the country for bee-keeping, I have often since thought it over from that point of view after I took up with this most engaging cult, which was in the spring of 1903, six months after arriving home.

I have no distinct recollection of the possibilities of Petrusberg itself, but, speaking generally, I think the prospect would be but medium, as flora of any sort did not appear sufficiently abundant for apiaries on a large scale. We did once find a bucketful of dark honey on a farm, but I saw no trace of bees otherwise on any other occasion. Did I live in any part of the colony, however, I should certainly try the experiment.

Natal certainly offers far more alluring prospects. The district around Pietermaritzburg struck me as being peculiarly productive, and I may say I am hoping one day to find myself there. The greater part of Cape Colony and the Transvaal undoubtedly contain vast harvests of honey-yielding plants. This I send for what it is worth.—H. M., Bristol, June 7.

PROLIFIC QUEENS.

[5554.] No doubt many of your readers would be greatly interested in the letter by Mr. Thomas Wells (5543, page 225) *re* the above. I think we shall hear more of the prolificness of queens this season. Take the case of one of my hives, which was made up last September from three driven lots of bees headed by a queen of the same year, and which came out strong in the spring.

Being desirous of ascertaining which foundation they would draw out quickest, I inserted on May 15 one sheet of Weed and one of Taylor's, Welwyn. I looked in this hive on May 17, and found the sheet of Taylor's foundation fully drawn out, and an egg in nearly every cell; the frame of Weed being only partly drawn out. On May 21 I put in another sheet of each kind, the result being on the 24th one frame fully drawn out and filled with eggs; the frame of Weed not quite so far advanced.

On June 1 I put on rack of ten shallow frames fitted with Taylor's foundation, and to-day, June 13, they are nearly all full of sealed brood. This looks like a good queen, with good foundation, and weather being right this season, they will no doubt give a very creditable account of themselves.

I have also had an opportunity of seeing the prolificness of other queens in this district, having brought a swarm home on June 8 that weighed 6 lb., and another at 5 lb. weight.

I trust brother bee-keepers will not be disappointed in their expectations of a good harvest this season.—E. GEO. IVE, Ollerton, June 13.

SWARMS UNITING.

[5555.] We have had what we consider a somewhat unusual experience with our bees, and I thought you would like particulars for your valuable paper the B.B.J. I may incidentally mention that my father was away at the time for the week-end, and consequently I was driven rather into a corner. On June 12 the weather was very close and thunder threatened several times during the day; previous to this it had been rather cold and wet, and, consequently, the bees could not do very much.

At 9.15 a.m. on that day my first swarm issued. This settled in our garden, and I took it in the usual way. About ten or fifteen minutes later another swarm issued, and joined the first one in the skep; and within an hour (or, to be more precise, between 9.15 a.m. and 10.30 a.m.) I had no less than seven swarms out, at intervals of about ten minutes between each, and they all joined the first one. It was soon evident that one skep was not sufficient to hold them, so I put down another empty skep by the side of the first, and the bees took to this very well. The two skeps were soon very full, and there were some bees on the outside. However, after a time, they seemed to have settled nicely. I well sheltered them by putting several leafy boughs all round the sides to keep off the direct rays of the sun.

Things now began to get quieter, but at 11.30 I had an eighth swarm issue, which, happily, kept separate from the others. These I successfully hived. After lunch I busied myself in getting the hives, etc., ready for putting the bees in in the evening. However, at 3.30 o'clock in the after-

noon I noticed something unusual happening; the whole contents of the two skeps (*i.e.*, the seven swarms) came out, and the air was literally black with bees. I was afraid whether they would not go right away, so I syringed them with water. They eventually settled (together) about thirty yards off, in a pear tree, in the adjoining garden. The bees covered the whole stem of the tree (about five feet high), and also clustered in the branches. They were then in a rather difficult position to take because of the large number of bees over so large a space. I got all the available empty skeps—four in all—well moistened them with water, and then brushed the bees into them. When the first skep was full I took the second, and so on until I had the bulk of the bees hived. They then settled down very well, and we brought them home in the evening, and put them in two "W.B.C." hives.

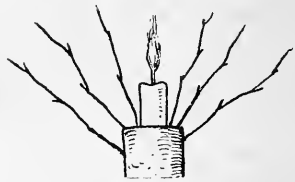
I was very careful to weigh each skep before throwing bees out, after which I weighed the empty skeps; the net weight of the bees was as follows:—Put into No. 1 hive 19 lb.; put into No. 2 20½ lb.; total, 39½ lb. bees. The eighth swarm (which I returned to the hive it came from) weighed 8½ lb. This made a total for the day of 48 lb. bees. I was sorry I could not divide the large quantity into three, but being all together it was difficult to know whether one had a queen in each lot.

I put on a crate of shallow-frames the same day to give them plenty of room, and to-day (Tuesday) we put on a second crate. They are now working well, and the hives are quite full of bees. I was very particular as to the weights, and I had two persons to verify them. I should like to know if you have ever heard of a parallel case. If you consider the foregoing sufficiently interesting to your readers, I should be very pleased if you would publish it. Thanking you in anticipation.—GARNET T. TEMBLETT, Andover, June 14.

[It is not uncommon in large apiaries where swarming is not controlled, and the commotion created by a swarm frequently induces other colonies to swarm also, in which cases they generally unite.—EDS.]

TRAPPING WAX-MOTHS.

[5556.] I have long studied wax-moths, and having forty hives (spring count), in order to keep these pests out it takes me all my time, though, to see the hives at Plavia (Istria) literally crammed full of bees, it would do your eyes good. These hives are already full of honey. The best trap for these wax-moths that I have found is bird lime twigs stuck into a cork as in diagram, with a glass of oil in the centre with a wick floating on the top similar to a night-light. This will last for many nights. The moths at night are attracted by the light, and in their endeavour to get at it they stick to the bird lime, never to get away again. You have no idea how quickly you will get rid of the moths in this manner. I have been most successful with the mole-traps recommended in B.J. for 1903, page 224, and am much obliged to those gentlemen who kindly helped me when in need. I hope some of my bee-brothers will benefit by this moth-trap. This is just the time for them out here, but possibly in England they come out later. I have seen no traps for moths mentioned in your interesting BEE JOURNAL up to the present, so hope to hear someone has benefited by it. I



Wax-Moth Trap.

have also to contend here against black scorpions, and I have killed many large ones too, but I do not know of a trap for them. Can any reader of B.J. help me? I find them under the coverings and in corners. Wishing all a prosperous honey year—NEMO, Trieste, Austria, June 11.

DRONES IN HIVES.

[5557.] Seeing the very opposite views expressed on the question of drones in hives, I venture to offer a humble suggestion. It is that after the mating season a piece of excluder zinc, with two or three escape cones inserted, large enough for drones to pass through, should be fixed across the full width of entrance. The drones would get out, but not one in ten get back, and this might prevent swarming. Of course the workers would pass through the zinc with some little crowding, but this need only be for a day or two, as the drones would be dead.—CARSHALTON, June 14.

PERSISTENT SWARMING.

[5558.] I am enclosing a short report of the doings of my bees, which may be useful for your paper or not, as you decide. Last year I re-queened two of my hives with Italian queens, and so far they have been a great success. One hive has twelve brood frames, the centre ones are packed with brood, and the outside ones are ready to have the honey extracted. On the top I have two supers containing twenty-one sections each nearly ready for

taking off. To-day I removed ten sealed queen cells. On June 1 this hive swarmed and I returned the bees to the hive after ascertaining that no young queen was hatched, and removing all queen cells. On the 11th they swarmed again, rising high in the air, and flying off in spite of all our efforts to stop them. After crossing a large field, the road, and canal, they alighted in a small garden belonging to a farm in which an empty bar-framed hive stood, its occupants having died during the winter. This the swarm entered. I need not say I saw them safely in, and later in the evening carried them home.—T. T., Bolton-le-Sands, June 14.

Queries and Replies.

[3463.] *No Eggs in Cells.*—Will you kindly give me your advice on the following?—A stock in my apiary was given shallow frames May 19. Bees occupied same strongly May 21, and swarmed May 26. I then removed five queen cells 9.30 a.m., May 29; the same stock sent off a cast June 3. The parent stock is now in super strongly again June 11. The swarm is now on twelve frames all worked out and brood in every frame, and these I propose supering June 18. The cast on four frames had worked them out by June 11, but no eggs were in the cells. Bees carrying in pollen fairly fast and drones were entering hive June 12. All these particulars and dates I get in a few seconds from the "B.B.K. Notebook," which I consider all beekeepers should possess. I would be greatly obliged if you would tell me: 1. Is it considered good bee-keeping to remove queen cells with the object of preventing swarming, and, if so, how long before supering should it be done? 2. Would the queen which headed the cast be already hatched before cells were removed? 3. Should she not have been fertilised before now, as there have been several sunny days, or would the drones seen to enter fertilise her in the hive? 4. Would you advise another examination in a week, and what should I then do if there are still no eggs in cells? I await your kind reply through the B.B.J. with interest.—A. H. W., Four Oaks, June 13.

Reply.—1. When bees commence making queen cells it is difficult to prevent swarming. The best plan is to remove combs of brood and give the queen room for egg-laying. 2. Yes. 3. The queen is usually fertilised on the wing, and leaves the hive for this purpose from the third to fifth day after emerging from the cells. This period may be delayed by the weather if cold, although after the twenty-first day the queen generally becomes a drone breeder. 4. At next examination we have no doubt you will find eggs as the bees are carrying in pollen for brood. If the lot is queenless unite with one having a queen.

[3464.] *Temperature of Hives.*—Am I right in leaving on two felt quilts on top of section crates? I live in Northumberland, where the climate is chilly and variable. 2. Would you further kindly advise me as to why a strong hive of Carniolan bees will not go up into sections, which are fitted with full foundation? I have them in a large hive with ten frames of brood bars, all full of brood, and above ten shallow bars, which are full of part brood, part honey, and on top crate of sections. They have swarmed once, and seem very strong. I have now driven the queen, etc., down into lower brood-chamber and put on a queen-excluder, and I assume, when brood in shallow frames has hatched, bees will fill with honey and then go on to sections. Am I right? Your reply will be esteemed.—X. Y. Z., Salisbury, June 11.

Reply.—In your district you are quite right in keeping on the quilts. 2. Your rack is probably not wrapped up warm enough. Bees will not take to sections unless they are well protected from cold. If you can keep the bees from swarming again they ought to continue work above and fill the hatching brood-cells with honey, unless unfavourable weather prevents them from doing so.

[3465.] *Bees Fighting.*—I shall be much obliged if you will tell me if I have done wrong in the following:—1. On May 29 I had a good swarm from a hive. On June 6 a cast came out, was taken and thrown back the same evening. The super was on, and there was plenty of room. On June 9 they came out again, and thinking it was no use to put them back, I decided to unite to rather a small swarm that I had hived three weeks ago. This I did in the evening, after spraying both with syrup, as per "Guide Book." Soon after fighting began, and apparently went on all night, as next morning about half or more of the bees were dead on the ground. If I made any mistake I shall be glad to know how to avoid in the future. I was unable to catch the queen going in with the swarm. 2. Can bees be driven in the autumn from a box, like many cottagers use, into a skep? Thanking you in anticipation, I am, etc.—M. D., Seaford, June 10.

Reply.—1. As you did not require your cast the better plan would have been to destroy all queen-cells before returning it to the hive. For uniting, it is necessary that both lots have the same scent or be well dusted with flour and the bees thoroughly mixed. The queen of the

swarm should also have been captured. This not having been done and the spraying not sufficient are the cause of the fighting. 2. Yes, just as well as from a skep, only the rapping must be harder.

[3466.] *Queen Mating.*—Will you please tell me in B.B.J. if queens can be mated in hive, as there are a lot of common bees about, and I wish to rear pure Italians? Could I put Italian drones from another hive in nuclei with virgin queens? I enclose name, etc., and sign myself—B., Birmingham, June 11.

Reply.—Queens mate on the wing, and not in the hive. It would be useless for you to put drones from another hive in the nuclei with virgin queens for this purpose. Your best plan is to prevent drones flying out from hives containing common bees by means of drone traps.

[3467.] *Bleaching Wax.*—Would you be good enough to tell me how to bleach beeswax? It is Weed foundation, but as I have heather honey in the combs it is dark when melted, and I should like to have it yellow in colour if it can be made so, as I could then sell it for a better price. People do not care for dark-coloured wax, as they think it is not pure. Perhaps you or some of the B.B.J. readers could tell me. I send name and sign myself—Beeswax, Sheffield, June 11.

Reply.—Wax-bleachers draw wax into small ribbons, which are exposed to the rays of the sun for several weeks. It can also be treated with chemicals, but in using acids great care is necessary. The following is the process:—Take ½ oz. of the best roll annotto, cut it into thin pieces and put it in a clean copper or enamelled vessel with a pint of water, and boil it until it is perfectly dissolved; then add 14 lb. of melted wax and continue the boiling until the wax has taken up the colour and the greater portion of the water has evaporated, then, withdrawing the heat, carefully sprinkle over its whole surface about half a fluid ounce of sulphuric acid. Attention must be paid or it will froth up and boil over. The melted wax should now be covered and left for some hours to settle and cool slowly, care being taken not to disturb the sediment. All the impurities will be at the bottom of the cake and should be scraped off.

[3468.] *Sentinels at Entrance of Hive.*—I have two hives of bees. One hive has a complete row of sentinels at entrance, but at the other hive I never notice any sentinels at all. Kindly tell me if an absence of sentinels indicates anything?—Mel Rosæ, Isle of Wight, June 15.

Reply.—It indicates that the hive with the sentinels is the stronger of the two, and is more vigilant in guarding its entrance.

[3469.] *Case of Arrenotokia.*—Would you kindly examine the queen enclosed in box, which I send. She was hatched about the middle of April, but did not commence to lay until about three weeks later, when I found eggs on one frame. About two weeks later I again examined the hive and found a few more eggs, but the others were in the same state as when first seen. I again examined them on the 14th and found eggs on three frames, but still none hatched. Could you enlighten me on this matter? I believe there were drones about at the time the queen was hatched. Thanking you for your former replies, I send name and sign—T. B., Worcester, June 15.

Reply.—The abdominal segments of queen have been damaged, either by pinching or other pressure, and owing to paralysis of the muscles she is not able to fertilise the eggs, although there are spermatoza in the spermatheca. To this state the name of "arrenotokia" is given.

[3470.] *Bees Not Taking to Supers.*—Having placed sections in my hive some twelve days since, I find practically no work has yet been done upon them, though a few bees may be seen in most of the sections, possibly totalling three or four dozen altogether. Should any means be taken to get a larger number of bees up, or is the fact that there are a few among the sections sufficient to guarantee more following in due time? No smoke was used to frighten bees when peeping in, and the body-box appeared pretty full of bees, judging from the three observatory windows. The hive is a ten-frame one. I enclose name and sign—Doubtful, Cheshire, June 16.

Reply.—If the bees are not up in the supers now the colony must be weak or the supers not warm enough for the bees to work in them. Reduce the number of frames in hive so as to crowd the bees below, which probably will induce them to go up.

[3471.] *Fertile Workers.*—Finding two lots, one especially rather weak, I united them on May 16. They were then strong, and on 19th I placed a super, with excluder zinc at entrance, as on other colonies to prevent swarming, notwithstanding which on May 25 a swarm issued. The swarm colony is doing well, but the parent hive has failed to raise queen, and fertile worker of workers have set up. How to distinguish these from other workers I do not know. Nor am I aware of any full description or representation of eggs so as to distinguish that stage from unsealed colony. Should excluder zinc at entrance not prevent issue of queen or drones? Any advice for guidance on above *contretemps* in your next number will be most welcome.—Sussex Downs, June 15.

REPLY.—You cannot distinguish a fertile worker from other bees, and must catch them in the act of laying the eggs, which do not differ in appearance from those of a queen. Excluder zinc, if with proper perforations, would prevent issue of drones and queen unless they were very small. The plan of putting excluder zinc at the entrance is, however, a very bad one, and may get choked up by drones. Your best plan is to break up the colony, dividing it among strong colonies having fertile queen.

REVIEWS OF FOREIGN JOURNALS.

By "Nemo."

We read in *Gleanings* that W. A. Moore and G. F. White, bacteriologists of the Department of Agriculture of New York, who did not agree with Dr. W. R. Howard, who had stated that black brood was due to a specific bacillus, which he named *Bacillus milii*, have gone over their work again, and their report differs diametrically from that of Dr. Howard. They have examined many more specimens sent in by the inspectors, and in every sample they found *Bacillus alvei*. Specimens were received from Columbia, Albany, Schoharie, Montgomery, and Green Counties. The bacteriological findings in not a single case disclosed *Bacillus milii* of Dr. Howard. Messrs Moore and White both appear to discredit the work of Dr. Howard, for besides not finding *Bacillus milii*, they were not able to discover the bacillus of pickled brood, which Dr. Howard has called *Aspergillus pollinis*. The same investigators conducted a number of experiments to determine the value of the treatment with formalin for foul brood, but found it to be not entirely effective. Their conclusion seems to be that, if the fumes of it are applied long enough inside a hermetically sealed enclosure, it will kill the living germs. Two or three hours they consider insufficient, nor twenty-four hours in an ordinary bee-hive. Affected combs should be subjected to two days' fumigation in an air-tight compartment to kill the spores in the decayed larvæ.

In *Le Rucher Belge* M. Van Hay says that the inhabitants of a hive are renewed during summer three or four times, and once between October and the middle of April. The older worker bees disappear during winter, and only the young bees—those hatched late in the season—survive until spring to commence the work of the year. A colony given an Italian queen on September 20 had no common bees left on April 11 following.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

July 14 and 15, at Grimsby.—Show of Honey, Hives, and Bee Appliances in connection with the Lincolnshire Agricultural Society. Bee Department under the management of the Lincs. B.K.A. Fourteen classes Liberal money prizes and silver medals. Schedules from R. Godson, Hon. Sec. Lincs. B.K.A., Tothill, Alford, Lincs. **Entries closed.**

July 27, at Henbury, near Bristol.—Annual Show of the Henbury District Bee-keepers' Association in connection with the Horticultural Society's Exhibition. Several open classes with good prizes (two classes with free entry). Schedules from the Hon. Sec., J. Atkin Waller, Pen Park, Westbury-on-Trym, near Bristol. **Entries close July 23.**

July 27 and 28, at Cardiff.—Glamorgan B.K.A. Show of Honey, Wax, and Appliances in connection with the Cardiff and County Horticultural Society. Prizes (open to non-members) for Comb and Extracted Honey, Appliances, Frame Hive, Wax, Observatory Hive, and Comb in Fancy Design. Medals and money prizes. Schedules from Wm. Richards, Gabalfa, Cardiff. **Entries close July 21.**

July 29, 30, and August 1 and 2, at Southport.—Annual Show of the Royal Lancashire Agricultural Society. Liberal money-prizes are offered for honey along with silver and bronze medals of the B.K.A. and also of the Society. Open classes for Honey-Trophy, Sections, Extracted Honey, Beeswax, Honey-Confectionery, Bee Flowers, Instructive Exhibits in Bee-Culture, &c. Schedules from Edward Bohane, Secretary, Miller-arcade, Preston. **Entries close June 29.**

August 1 (Bank Holiday), Windsor District, Berks B.K.A.—Annual Show of Honey and Bee-Appliances in conjunction with the Clewer Horticultural Society, in the grounds of Clewer Manor (by permission of E. B. Foster, Esq., J.P., C.C.) Open classes for Observatory Hive, Twelve 1-lb. Sections, and Twelve 1-lb Jars Extracted Honey. Also classes for Berks only, and for Windsor District only. Schedules from W. S. Darby, Hon. Sec, Consort Villas, Clewer. **Entries close July 23.**

August 3 to 5, at Huddersfield.—Show of Honey, &c, in connection with the Royal Yorkshire Agricultural Society Schedules and form of entry from Hon. Sec, John Maughan, Blake-street, York. **Entries close June 25. Late entries at double fees up to July 2.**

August 4, at Kingsthorpe, Northants.—Honey Show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar of honey (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Hon. Sec., Kingsthorpe, Northampton. **Entries close August 1.**

August 10, at Wye.—Kent Honey Show.—Several classes for Extracted and Comb Honey, Trophy, Wax, Mead, Cakes, &c., &c. Liberal cash prizes and silver medals. Open Classes for Single 1-lb Jar Extracted Honey (Light); Ditto (Dark); Single 1-lb. Section, with prizes of 20s., 10s, and 5s. in each class. Bee Demonstrations, Horticultural Show, Cycle Sports, &c. **Entries close August 5.** Schedules from J. Tippen, Secretary, Wye, Ashford, Kent.

August 24, at Fleetwood.—Honey Show in connection with Fleetwood Floral and Horticultural Society. Open classes for Six 1-lb. Sections. Six 1-lb. Jars Light Extracted Honey, and Six 1-lb. Jars Dark Extracted Honey. Schedules from Edward Cook, Hon. Sec., Rossall Grange Farm, Fleetwood. **Entries close August 14.**

August 24, at Sandbach.—Honey Department of the Cheshire Agricultural Society's Show, under the management of the Cheshire B.K.A. Open classes for Hives, Sections, and Extracted Honey. Substantial prizes. Bee Lectures and Demonstrations on the show-ground. Schedules from T. A. Beckett, St. Werburgh's Chambers, Chester. **Entries close August 3 (at double fees August 10).**

August 24 and 25, at Leamington.—Annual Show of the Warwickshire B.K.A. in connection with that of the Warwickshire Agricultural Society. Schedules from James Noble Bower, Hon. Sec., Warwickshire B.K.A., Knowle.

August 25, at Llangollen.—In connection with the Sixth Annual Flower Show. Open classes for Six 1-lb. Sections, Six Jars Extracted Honey, and Beeswax. Schedules from Frank Little, **Brook Bank**, Llangollen. **Entries close August 11.**

August 30, at Cartmel, Lancashire.—Honey show in connection with the 32nd Annual Show of the Cartmel Agricultural Society. Three open classes for Comb and Extracted Honey (prizes, 15s., 10s., 5s., and 2s. 6d.), and Beeswax (prizes, 10s. and 5s.), along with silver and bronze medals of the Lancs B.K.A. Schedules from W. Cragg, Secretary, Cartmel, viâ Carnforth. **Entries close August 18.**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

WALTON PARK (Clevedon).—The old queen must have been superseded and swarm headed by a young one. You can tell if she is fertile by examining the combs to see if there are any eggs. Superseding of old queen is not unusual. Most likely the bird you saw was a butcher bird. The bees are not sufficiently crowded in the supers, and during chilly weather keep as near the cluster as they can.

APIARIST (Cumberland).—The immature bees (not larvæ) have been chilled, and therefore cast out of the hive. None of them are full grown. They appear healthy, but we cannot say if there is foul brood in the hive without seeing combs with brood in various stages.

T. T. (Carnforth).—The old queen should have been removed before you inserted brood with queen cells, as these are liable to be torn down when there is a queen in the hive.

D. M. C. (Haddington).—The queen reached us perfectly flat, but from the brightness of the wings we judge her to be a young one of the common variety. You should be more careful in addressing your letters correctly. Your letter addressed to Oxford Street has made several journeys before it reached our office.

CARSHALTON.—Drones are usually cast out when bees give up the idea of swarming or if short of supplies.

Suspected Combs.

B. B. (Derby).—Both combs sent contain nothing but dried pollen, and they are free from disease. We should, however, advise cutting out any combs that show mouldiness in the cells.

S. M. (Sheffield).—Sample sent shows foul brood in a very advanced stage. The queen is evidently a drone-breeder, as the worker cells contained drones. The colony is worthless, and should be destroyed.

L. G. S. (Dublin).—Very bad case of foul brood, nearly every cell being diseased. All such combs should be destroyed without delay, and the bees treated as recommended in "Guide Book."

WORDSLEY (Stourbridge).—Sample shows a bad case of foul brood, and the treatment should be drastic and immediate.

DOUBTFUL (Ely).—There is both chilled and foul brood in comb sent.

W. D. (Warwickshire).—Foul brood of long standing. As the bees have died out destroy the combs and frames.

WILTS (Swindon).—The whole of the brood is badly chilled.

Special Prepaid Advertisements.

Twelve words and under; Sixpence; for every additional Three words or under, One Penny

Advertisements for current issue must be received by first post on Tuesday.

FERTILE QUEENS, return post 4s. each. Four-frame STOCKS, with young Fertile Queen, 15s. each. FRANK REED, Portslade, Sussex. B 71

A FEW MORE SWARMS at 2s. 6d. per lb. Every one travelled safely this season, some 600 miles. DAVIDSON, Expert, Beecroft, Basingstoke. B 70

WALLFLOWER PLANTS (dark, Fe tham). Best for early flowering. 8d. per dozen, 4s. per hundred; carriage free. JOHN P. PHILLIPS, Spetchley, Worcester. B 69

STRONG HEALTHY NATURAL SWARMS, 1 s. 6d. including skeps, guaranteed safe arrival. CADMAN, Codsall Wood. B 58

WANTED EXTRACTOR in good condition; Cowan's preferred. State lowest price. THORNTON, 7, Hose Side, Liscard. B 61

WHAT OFFERS in SWARMS for ten Ducks (laying) and five Drakes? TILDESLEY, New Invention, Wolverhampton. B 59

THREE BAR-FRAME HIVES by Taylor, and complete Outfit, 30s. DRAKE, 366A, Merton-road, Southfields, Wandsworth. B 56

WANTED, 50 good SWARMS BEES. TREBBLE, Devon Hive Works, Romansleigh, South Molton. B 65

WANTED, strong, healthy SWARM; will give prize pen Cromblehomes, Silver Wyandottes, value £1. ENTWISTLE, Blackbrook, Belper. B 64

EXTRACTOR FOR SALE, takes Standards, or two Sections, strong, perfect, cost 14s. 6d., 9s. 6d. cash. Strong Swarms on hand, 10s. 6d. F. PORTER, Manby, Louth, Lincs. B 63

20 NATURAL SWARMS WANTED; empty skeps supplied. PARKES, Hooton Hall Apiary, Cheshire. B 68

FOR SALE, Honey in Sections, 1-lb. screw-cap jars and 28-lb. tins; also sheets Corrugated Roofing, 30 in. by 24 in. by 1 in.; Corrugations 1s. 4d. each, 7s. 6d. half doz., 14s. doz. Screw-cap 16 oz. white Glass Bottles including cork wad, 20s. gross; quantities less; sample 6d. H. J. WISBEY, Whittlesford Mill, Cambs. B 60

MAGNIFICENT STOCK pure "Golden Prolific" ITALIANS, 1903 Queen, crowding 10 frames, cost 37s. 6d. from Sladen as three-comb nucleus this April; in Taylor's 1904 "W.B.C." 25s. Hive; working in supers; cost me £3 9s. complete. Very strong 10-frame Stock Sladen's "Hardy and Prolific" 1903 Queen, 32s. 6d. as April nucleus; in first-rate standard hive supered; cost me £3 complete. Both will easily return their cost this season. Taylor's 1 cwt. Ripener 10s. 6d. in March, unused. Reasonable offers. Cash or first quality honey to C. LEAL, Hayle Poultry Farm, Ltd., Cornwall. B 67

Editorial, Notices, &c.

ROYAL AGRICULTURAL SOCIETY.

SHOW AT PARK ROYAL, LONDON.

The sixty-fifth annual exhibition of the R.A.S.E. opened on Tuesday, 21st inst., at the Society's permanent show-yard, Park Royal, London. During the past year much has been done to improve the ground and add to the comfort and pleasure of visitors, and one must indeed be difficult to please who finds fault with such an excellently planned and approachable enclosure. Brilliant sunshine enabled one to see the showyard at its best, and although members of the society and exhibitors were present in large numbers, the attendance of the public fell far short of expectations. Although it is more convenient to have a permanent home near the metropolis, it is doubtful if the abandonment of a peripatetic career will not prove disastrous financially to the society, and compel it to return to the old plan of holding its annual shows in populated districts in different parts of the country.

The bee department occupied a prominent position near the educational department, and was well filled with exhibits, but the entries in the honey classes, although considerably larger than last year, were quite inadequate to the number and value of the prizes offered.

Three collections of excellent quality were shown, and we were pleased to see in these "outfits for beginners" at a fixed price, for beginners are apt to be puzzled when they see the different articles exhibited in these collections, and fancy that they are a *sine quâ non* for successful bee-keeping. In the hive classes, Messrs. Lee again secured the first prize with a "W.B.C." hive, the second prize in class 407 going to Mr. Meadows for a hive with an arrangement for lowering the swarm-preventing chamber, to remove it without crushing the bees.

In class 411 Messrs. Lee obtained first prize for a very interesting exhibition of a "Swarthmore" outfit for queen rearing in active operation. Live cells were being worked out and larvæ fed, and the whole process was practically demonstrated from the commencement, ending with two little nuclei containing fertilised queens. Mr. Meadows obtained second prize for a somewhat similar appliance, said to be more adapted to British requirements, but it lacked the same interest through not being in operation. Mr. Meadows also obtained third prize for an ingenious new rapid heating wax extractor.

The honey classes were very disappointing, and when the prize cards were placed in front of the exhibits it looked as if every entry had received a prize. In class 428 there were only two entries for three prizes, and only in class 415 did all the exhibits entered, viz., 10, appear on the tables. It is quite evident that the grouping of counties has not attained the result anticipated. It will be remembered that the B.B.K.A. was induced by representatives of County Associations to form groups of counties so that bee-keepers from different districts could compete amongst themselves and not with those situated in more favourable localities. The Council of the B.B.K.A. decided to try this experiment, and have given in prizes at this one show all they received in affiliation fees from the counties; it is, therefore, very discouraging to find how little support the counties have given in exhibiting this year. Now that this grouping has for two successive years proved such a failure, it would be well for the B.B.K.A. to revert to the old plan and reduce the number of classes. The honey shown was, with a few exceptions, of excellent quality; the sections in class 432 being especially good in quality and appearance, and praise is due to those who took the trouble to send their exhibits.

In the trophy class, 436, Mr. J. Pearman took first prize and Mr. R. Brown second in a very close competition, all the honey staged being of excellent quality and very neatly and tastefully got up and staged.

Mr. T. W. Cowan and Rev. T. J. Evans, Ince Vicarage, Chester, judged the bee-appliances and miscellaneous classes; those for honey and honey trophies being taken by Messrs. T. I. Weston and Dr. P. Sharp, Brant Broughton; Mr. W. T. Reid acting as steward of the department. The following were the awards:—

Class 406.—*Collection of Hives and Appliances, Including Suitable Outfit for Beginner in Bee-keeping.*—1st, James Lee and Son, 4, Martineau Road, Highbury, London, N.; 2nd, W. P. Meadows, Syston, Leicester; 3rd, E. H. Taylor, Welwyn, Herts.

Class 407.—*Complete Frame-hive for General Use.*—1st, James Lee and Son; 2nd, W. P. Meadows; 3rd, W. P. Meadows; h.c., E. H. Taylor; c., C. L. Greenhill, 80 Graham Road, Wimbledon.

Class 408.—*Inexpensive Frame-hive for Cottager's Use.*—1st, James Lee and Son; 2nd, W. P. Meadows; 3rd, E. H. Taylor; h.c., W. P. Meadows; c., C. L. Greenhill.

Class 409.—*Honey Extractor.*—1st, W. P. Meadows; 2nd, W. P. Meadows; 3rd, W. P. Meadows.

Class 410.—*Observatory Hive with Bees and Queen.*—1st, James Lee and Son; 2nd, Sir Humphrey F. de Trafford, Bart., Hill Crest, Market Harborough; 3rd, E. H. Taylor.

Class 411.—*Any Appliance Connected with Bee-keeping.*—1st, James Lee and Son; 2nd, W. P. Meadows; 3rd, W. P. Meadows.

Class 412.—*Twelve* 1-*lb. Sections.*—1st, E. C. R. White, Newton Toney, near Salisbury; 2nd, John Edwards, Callington, Cornwall; 3rd, P. B. Govett, Tideford, St. Germans, Cornwall.

Class 413.—*Twelve* 1-*lb. Jars of Extracted Light-Coloured Honey.*—1st, J. Edwards; 2nd, J. Chapman, Somerset House, Ludgershall, Wilts; 3rd, Mrs. H. H. Woosnam, Hope, Kingsbridge, Devon; h.c., E. C. R. White.

Class 414.—*Twelve* 1-*lb. Jars of Extracted Medium or Dark-Coloured Honey.*—1st, F. A. Kent, Fordington, Dorchester; 2nd, Charles Squire, Mortehoe, North Devon; 3rd, J. Edwards; h.c. Rev. W. E. Burkitt, Buttermere Rectory, Hungerford.

Class 415.—*Twelve* 1-*lb. Jars of Granulated Honey.*—1st, E. C. R. White; 2nd, F. A. Kent; v.h.c., J. R. T. Kingwell, Great Aish, South Brent, Devon; h.c., F. Chapman.

Class 416.—*Twelve* 1-*lb. Sections.*—1st, W. Woodley, Beedon, Newbury; 2nd, W. Blakeman, Ovington, Alresford, Hants; 3rd, H. D. Davidson, Beecroft, Basingstoke.

Class 417.—*Twelve* 1-*lb. Jars of Extracted Light-Coloured Honey.*—1st, James Lee and Son, Monks Acre, Andover; 2nd, W. Woodley; 3rd, Fred Powers, 10, East Street, Andover.

Class 418.—*Twelve* 1-*lb. Jars of Extracted Medium or Dark-Coloured Honey.*—1st, James Lee and Son.

Class 419.—*Twelve* 1-*lb. Jars of Granulated Honey.*—1st, W. Woodley; 2nd, James Lee and Son.

Class 420.—*Twelve* 1-*lb. Sections of Comb Honey.*—1st, C. Lodge, High Easter, Chelmsford; 2nd, Walter Turner, Langley House, Brent Eleigh, Lavenham; 3rd, H. W. Seymour, 53, Market Place, Henley-on-Thames.

Class 421.—*Twelve* 1-*lb. Jars of Extracted Light-Coloured Honey.*—1st, S. P. Soal, Reliable Bee-farm, Rochford, Essex; 2nd, C. Lodge; 3rd, H. W. Seymour; h.c., Charles Bocock, Ashley Apiaries, Newmarket.

Class 422.—*Twelve* 1-*lb. Jars of Extracted Medium or Dark-Coloured Honey.*—1st, H. W. Seymour; 2nd, C. Lodge.

Class 423.—*Twelve* 1-*lb. Jars of Granulated Honey.*—1st, C. Lodge; 2nd, H. W. Seymour.

Class 424.—*Twelve* 1-*lb. Sections of Comb Honey.*—1st, G. Hills, Comberton, Cambridge; 2nd, R. Brown, Flora Apiary, Somersham.

Class 425.—*Twelve* 1-*lb. Jars of Extracted Light-Coloured Honey.*—1st, James Adams, West Haddon, Rugby; 2nd, R. Brown.

Class 426.—*Twelve* 1-*lb. Jars of Extracted Medium or Dark-Coloured Honey.*—1st, R. Brown; 2nd, F. J. Ord, Chapel Place, Piddington, Northampton.

Class 427.—*Twelve* 1 *lb. Jars of Granulated Honey.*—1st, J. Barnes, Ivy Apiary, Burwell, Cambs; 2nd, R. Brown.

Class 428.—*Twelve* 1-*lb. Sections of Comb Honey.*—3rd, A. Hamer, Landillo, South Wales.

Class 429.—*Twelve* 1-*lb. Jars of Extracted Light-Coloured Honey.*—1st, A. Hamer; 2nd, A. G. Preen, Nesscliffe, near Shrewsbury; 3rd, G. W. Kirby, 10, Summerhill Road, St. George, Bristol.

Class 430.—*Twelve* 1-*lb. Jars of Extracted Medium or Dark-Coloured Honey.*—1st, G. W. Kirby; 2nd, G. M. Tune, Froneysylte, Llangollen, North Wales; 3rd, John Helme, Norton Canon, Weobley, Herefordshire.

Class 431.—*Twelve* 1-*lb. Jars of Granulated Honey.*—1st, John Helme; 2nd, John Arthars, Studley, Warwickshire.

Class 432.—*Twelve* 1-*lb. Sections of Comb Honey.*—1st, A. W. Weatherhogg, Willoughton, Lincoln; 2nd, Miss Helena Ratcliffe, Barthomley, near Crewe.

Class 433.—*Twelve* 1-*lb. Jars of Extracted Light-Coloured Honey.*—1st, G. H. Garner, Oxford Road, Altrincham; 2nd, T. S. Holdsworth, Kirton Lindsey, Lincs.; 3rd, W. J. Cook, Binbrook, near Market Rasen, Lincs.; h.c., J. Pearman, Penny Long Lane, Derby.

Class 434.—*Twelve* 1-*lb. Jars of Extracted Medium or Dark-Coloured Honey.*—1st, A. G. Pugh, Beech House, Beeston, Notts.; 2nd, T. S. Holdsworth; 3rd, Thomas Richards, 71, Wood Street, Church Gresley, near Burton-on-Trent.

Class 435.—*Twelve* 1-*lb. Jars of Granulated Honey.*—1st, A. E. Russell, Wyham House, Louth, Lincs.; 2nd, A. W. Weatherhogg; 3rd A. G. Pugh.

Class 436.—*Honey Trophy (Attractive Display in any Form).*—1st, J. Pearman; 2nd, R. Brown; 3rd, C. Lodge.

Class 437.—*Beeswax (Not Less than 2 lb.).*—1st, E. C. R. White; 2nd, C. Lodge; 3rd, H. W. Seymour; h.c., R. Dutton, Terling, Witham, Essex; h.c., S. P. Soal; h.c., C. Wells, Oxendon, Market Harborough; c., F. Chapman.

Class 438.—*Beeswax (Not Less than 3 lb., in Shape, Quality, and Package Suitable for the Retail Trade).*—1st, E. C. R. White; 2nd, H. W. Seymour; 3rd, G. W. Kirby; h.c., F. W. Frusher, New Road, Crowland, Lincs.; h.c., J. Pearman; c., C. Lodge.

Class 439.—*Honey Vinegar* (½-*Gallon*).—1st, C. Lodge; 2nd, G. W. Kirby; 3rd, H. W. Seymour.

Class 440.—*Mead* (½-*Gallon*).—1st, H. W. Seymour; 2nd, Ernest Walker, Maybury Lodge, Woking; 3rd, R. Allen, Tus-

more, Bicester, Oxon. ; c., E. Warran, 13, Chapel Street, Tavistock.

Class 441.—*Exhibit of a Practical or Interesting Nature Connected with Bee Culture.*—1st, R. Allen.

Class 442.—*Exhibit of a Scientific Nature not Mentioned in Foregoing Classes.*—No entry.

ROYAL LANCASHIRE AGRICULTURAL SOCIETY.

SPECIAL NOTICE RE LATE ENTRIES.

Referring to late entries for the above important show, which includes a long list of valuable prizes for bees and honey, the chairman of committee of the Lancashire B.K.A writes the subjoined letter, which we gladly publish, and trust the extension of time mentioned will be welcomed by many who now have produce on hand for showing. No time, however, should be lost in applying for entry forms. See "Shows to Come," page 258.—[EDS.]

Sirs,—Will you allow me to draw the attention of your readers to the Royal Lancashire Agricultural Society's show at Southport on July 29 and 30 and August 1 and 2? The society offers handsome prizes for honey in an extensive schedule giving opportunities of prize-winning to every bee-keeper, and I think bee-keepers ought to make a special point of supporting by entries the most liberal of the county agricultural societies in their endeavours to foster up-to-date bee-keeping. If entries are sent at once I have no doubt they will be accepted, even though a few days late.—GEORGE ROSE, Chairman of Committee of Lancashire B.K.A.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "THE EDITORS of the 'British Bee Journal,' 10, *Buckingham-street, Strand, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 10, *Buckingham-street, Strand, London, W.C.*"

NOTES BY THE WAY.

[5559.] The month of June, toward the close of which we are hastening, has not been an ideal bee month. We have had far better and much worse months from the bee-keeper's point of view. Therefore, at its close we must write it down as a moderately good bee month. I do not remember that bees have ever shown the trait of prolificness more than this season; colonies sending off large swarms have again filled up with bees very quickly owing to the large quantity of brood ready to hatch when the swarms came off, or larger number of fine queen-cells than during the present month. To-day, as I write, after a growing shower or two yesterday, the hum of the bees with a temperature near 70 degrees and honey coming in cheers the heart of the bee-keeper and makes life worth living.

To "H. V. F." (5550) I may say that for many years the sparse number of bees at the drinking places has been taken as an indication that the bees were storing honey in quantity, and when the honey flow is on he will find very little water is required, the elimination of the watery part of nectar as gathered by the bees taking the place of water required in the general way, or again, the ingathering of their food is of greater moment to them than their drink, of which they have a continual supply the year round.

Excluders.—I have no use for excluders under the crates of sections, but always use them for boxes of combs, and in placing the sheet of perforated zinc over the brood-combs I always place the slots *across* the frames, and also put a little piece of wood about the centre of the brood-nest on top of a bar to hold the excluder up $\frac{3}{8}$ in. to $\frac{1}{2}$ in. above the frames. This gives the bees access to the super by nearly all the holes in the excluder. I have not used the celluloid either as excluder or cover, and should consider there was some danger of a flare-up if a spark from the smoker fell on to it by accident.

Foul Brood Legislation.—The first question to be decided appears to me to be, will compulsory powers for destroying foul-broody apiaries benefit bee-keeping generally? What effect have the visits and work of the inspectors in the American States and the Canadian provinces had on bee-keeping the other side of the Atlantic? Is foul brood stamped out and its ravages reduced? In fact, are the inspectors likely in the near future to find (like Othello) their occupation gone? If so, and their work has had the desired effect, let us follow in their footsteps and do likewise; but if after their existence for several years the disease is still present, also that bee-keeping has not grown or made headway, that foul brood has again broken out in "cured" apiaries only a year or so before certified to be healthy by the inspector, then one feels inclined to question the utility of the Act or its working. Evidently the already over-burdened taxpayer will in the event of an increased number of inspectors have to pay, pay, pay! I say this

with no feeling against our friends' efforts to again seek Parliamentary powers to deal with the pest, but I do feel that we should make full inquiry into the results of the work of similar Acts for the suppression of foul brood before we saddle ourselves with powers which may prove abortive.—W. Woodley, Beedon, Newbury.

FOUL BROOD BILL.

[5560.] In the B.B.J. of the 16th inst. it was announced that the Devon B.K.A. had unanimously decided to recommend the Foul Brood Bill to the Devon County Council, as put before them by Mr. G. M. Saunders, Hon. Sec. Cumberland B.K.A. No time was lost in carrying out this resolution, with the happy result that the County Council, within a fortnight, signified to the Hon. Sec. Devon B.K.A. that they had decided to petition the Board of Agriculture in favour of the Bill. May I respectfully urge all other County Associations to follow suit?

A great deal depends upon prompt and energetic action, for the object of the vigorous and unselfish efforts of the Hon. Sec. Cumberland B.K.A. is to get the Bill passed economically as a Government measure during the present Session, and even should this not be possible nothing can be gained by delay. Perfect unanimity in favour of the measure cannot be expected perhaps, but it will suffice if the great majority of bee-keepers will signify their adhesion, and induce their County Councils to petition for the Bill and to declare their intention to work it when passed. This can be done even in those counties where B.K.A.s do not exist, and results should be at once made known to Mr. Saunders, and also to the Secretary B.B.K.A., who, as would appear from last week's B.B.J., is now communicating on this matter with the County Associations. Should the answers be prompt, the Council B.B.K.A. will be in a position to decide at its meeting in August, before the summer holidays, what answer it should give to the Board of Agriculture if called upon for its opinion, and in that case the conference of County Associations, in October next, might possibly only have to consider how their Associations should recommend the County Councils to put the measure into action. There is no doubt whatever that the future welfare of bee-keeping in this country largely depends upon the relations that are to exist between the Associations and their respective County Councils, and no chance should be lost by the Associations of establishing their influence. Such a chance now lies before them.

May I suggest that the principal clauses of the Bill, for which Mr. Saunders is much indebted to the skilful and energetic action of Mr. Cowan and the parent Association when legislation was unanimously sought by the Council B.B.K.A. in 1896, should be published in an early issue of the B.B.J.?—H. J. O. Walker, Lt.-Col.

FOUL BROOD LEGISLATION.

[5561.] Before any small section of bee-keepers tries to secure legislation in this matter I think it is desirable that a vote should, if possible, be taken through the pages of the British Bee Journal to ascertain the opinion of the majority on the matter. I am not opposed to anything that may be for the benefit of the community, but I have an objection to a small section of bee-keepers acting apart without consulting, as far as possible, the entire bee-keeping community.

Let it be borne in mind that it is unwise to invoke the aid of the law if the same can possibly be dispensed with. We must clearly realise that if we impose this proposed law upon ourselves it will mean a great loss of freedom. We must submit to the examination of our stocks at the free will and pleasure of a Government official, and personally I should not like that. Such legislation will also probably forbid the exportation or importation of bees from one district to another without the licence of the Government inspector and his certificate that the stock is healthy, and this will prove most annoying and vexatious. Are not expert bee-keepers at present able to keep the disease at bay by care? Therefore, is not our best course to bring voluntary effort to bear on individual bee-keepers, to educate them on the importance of proper methods of management?

I do not myself think that foul brood is at all so prevalent as some make out, and think there is no necessity for so much panic over it. Cleanliness and watchfulness will go a long way towards keeping it at bay, also the frequent renewal of brood combs and the infusion of new blood into the apiary. I am a strong believer in collective action when the same is necessary, but I much prefer that it should be free rather than compulsory. Compulsion is an ugly word, and the less officialism that we have the better. The best Government in the world would be one which required to interfere least with the individual.

A very good system of management which will help to prevent foul brood is to have a spare brood chamber for every hive, and each season to allow the bees to transfer themselves from one to the other, the old brood chamber being afterwards allowed to remain on as a super, and when

the honey is extracted, every comb to be disinfected and put away ready for use next season. This will secure abundance of bees and that cleanliness which is so essential.—W. J. FARMER, Truro, June 25.

BEES AND ORCHIDS.

[5562.] I send herewith a worker-bee which has curiously got a bunch of growth, apparently attached to its tongue. Can you in any way explain it; is it not rather unusual? I took it out of a swarm on Sunday last. Thanking you for past valuable information, I enclose name and sign—W. G. R. A., Oxford, June 14.

[The curious phenomenon referred to above is remarkable as showing the wonderful manner in which Nature achieves her ends by the aid of insects. Nearly every year, at this season, we have bees sent to us having similar attachments to those described above, and as the true cause or meaning is full of interest, though not generally known even to bee-keepers, we extract some particulars which appeared in our pages six or seven years ago in reply to a correspondent who sent specimen bees identical with those before us, whereon the "attachments" or horns appear as in the cut, Fig. 1. These horns are the pollen masses, or pollinia, as they are called, of the *Orchis mascula*, now blooming freely in many of our moist woods and shady places.

Fig. 1.

Fertilisation is effected in orchids quite differently from what it is in such flowers,

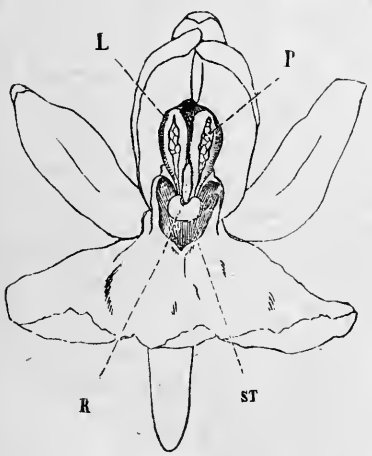


Fig. 2.

for instance, as those of our apple and pear trees. And so, with regard to the former, if we examine an orchis bloom from the front (Fig. 2) we shall get an idea of its structure, Fig. 3 giving a side view of the same flower on rather a smaller scale. The wrinkly stalk is seen in Fig. 3, and just below it, and between R and ST, Fig. 2, is the nectary or tube in which the nectar collects, and down which the bee has to put her tongue in order to reach the nectar. The stigma, ST (Fig. 2), is bilobed, consists of two almost confluent stigmas, and lies just under the pouch-formed rostellum, R. The anther just above it, L, consists of two—one of which, on the opposite side, corresponds to L—widely separated cells, which are open longitudinally in front, and each cell contains a pollen mass or pollinium, P.

Fig. 3.

The pollinia removed from these cells, and showing their relative positions, are seen at Fig. 4. Each pollinium consists of a number of packets of pollen-grains united together by elastic threads. These threads unite at the lower end of each pollen-mass, and form what are termed the *caudicles*, at the bottom of each being attached a viscid disc. Each pollinium has its own separate disc, and the balls of viscid matter constituting these discs lie enclosed together within the rostellum. The rostellum is almost a spherical, somewhat pointed projection overhanging the stigma, and seen in Fig. 3 just over the opening of the tube. Without going into full details of the structure of this complicated organ, we can explain that the pollen-masses are enclosed in two pouches, with the viscid discs downwards, these being covered by a very delicate membrane whilst in position. To understand how these pollinia get transferred to a bee's head, and fertilisation effected, we must watch a bee; and we shall see her alight on the lower petal or *labellum*, as it is called in orchids, and at once insert her head as far as she can get it into the tube. This is not far, for it is stopped by the projecting rostellum, this act rupturing the thin membrane, and exposing the viscid discs, which now adhere to the bee's head. The viscid matter has the property of becoming hard and dry in a few minutes.

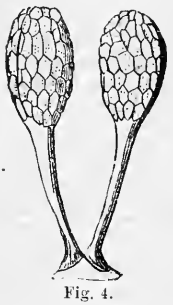


Fig. 4.

After taking the nectar, when the insect withdraws its head, one or both of the pollinia will be firmly attached to the head, and project like horns. The firmness of the attachment is very important, for if

the pollinia were to fall sideways or backwards, they could not fertilise the flowers. Now, the most marvellous contrivance exists by which the pollen-masses are brought into position for touching the stigma. The caudicle has the power of contraction in such a way that it causes the pollinium to sweep through an angle of ninety degrees, but always in the direction towards the proboscis of the insect, in the course of thirty seconds on an average. The time it takes to complete this movement is about sufficient to enable a bee to fly to another plant. On a bee entering the flower from the alighting-place, the thick ends of the pollinia exactly strike the stigmatic surface. This is also viscid, but not so viscid as to pull off the whole of the pollinium from the insect's head. It is sufficiently viscid to break the elastic threads, and leave some of the pollen-grains on the stigma, and in this manner the insect may, by means of one pollen-mass, fertilise several stigmas until nothing but the caudicles remain. Darwin, in his "Fertilisation of Orchids," describes how the whole of the process of removing the pollinia may be shown by inserting the point of a pencil into the nectary. The pollinia stand at right angles to the sloping side of the pencil, and if this is held still for half a minute it will be seen that the pollinia sweep towards the point of the pencil until they lie in a horizontal position (Fig. 5). We have many times used this

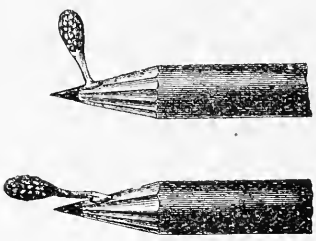


Fig. 5.

means of illustration, which has always caused astonishment and admiration of this contrivance for ensuring the fertilisation of these flowers.—EDS.]

BEE-KEEPING IN THE O.R.C.

[5563.] In the course of a letter from Kroonstad a correspondent of mine gave me the following information with regard to the possibilities of apiculture in his district. He says:—"I believe it may prove a paying business for a man who understands it, although it may have many drawbacks on account of this country being so dry, and the field most part of the season is dry—very few flowers. I believe Cape Colony or Natal would be better for such an industry." My correspondent is the owner of and runs many farms in the O.R.C., and can therefore speak with authority, at any rate on the question of forage.—B. NOEL REED, June 27.

Queries and Replies.

[3472.] *Making Three Colonies from Two.*—1. I have two strong hives which I imagine will swarm before long if left to themselves. From them I wish to stock an observatory hive, and shall be obliged if you will give me a little advice on the subject. Up to a certain point the process is made clear in the paragraph headed "To Make Three Colonies from Two" in the "Guide Book," but I am at a loss to know what becomes of the hive which is moved to a new stand. Do not all the bees leave it and go to the new hive which has been placed where it was previously? If so, I do not understand how the brood in the moved hive is reared. 2. If possible, I should like to have my observatory hive in a shed about two hundred yards from where the bees are at present. Could I do this by keeping this hive closed for a time, of course feeding the bees artificially in the meantime? If so, how long would I have to keep it closed? 3. Is there a right and a wrong way of putting foundation in sections? I ask because I notice that the pattern on the foundation looks different when viewed from different points of view, but the makers do not suggest that any one edge should be placed uppermost. 4. Does it make any difference whether the sections are placed in the same plane or at right-angles to the frames underneath them? I trust I am not asking questions which are answered in the "Guide Book," but I think not. Thanking you in anticipation.—T. E. L., Rumbling Bridge, June 20.

REPLY.—1. Only the bees on the wing return to the old stand, but there are generally plenty of nurses and other young bees that have not flown to take care of the brood in the moved hive. 2. You can do it by placing some obstacle to the flight of the bees from the hive so as to make them take notice of their surroundings. 3. The proper way of fixing foundation is to have the parallel sides of the cells perpendicular, as shown in illustration on page 64 of "Guide Book." 4. If the proper bee-space is given between the frames and sections it makes no difference.

[3473.] *Brace-Combs.*—Can you please state whether brace-combs connecting upper and lower bodies would be prevented by working the upper set of frames across the lower, instead of, as in the usual manner, having them running in same

direction? The Rymer honey-board prevents brace-combs, but it is expensive to provide several of these where several tiers are on each hive, and I am thinking in future of having square hives instead which will admit of cross working of the chambers.—J., Truro, June 22.

REPLY.—The best way of reducing the chance of brace-combs is to pay attention to having the correct bee-space between frames in super and those below. This space is barely a quarter of an inch. The Rymer board is worked on this principle, but you can do without it if you are particular about the bee-space, and can also work your frames across upon the same conditions.

[3474.] *Bees not Entering Supers.*—1. Will you kindly tell me the name of the breed of the enclosed bees, and if they are pure? Some of them have gone black and shiny. I had a very large swarm on May 15. I cut out all the queen cells but one after hiving the swarm in a new hive. But the stock has since swarmed twice. I put the last swarm back, which leaves me with three hives. I examined the stock after the last swarm and found they had built five queen cells on the surface of the comb, and the first swarm has got six queen cells, so I expect a swarm in a day or two. I have got Mr. Cowan's "Guide Book," his "Practical Notebook," and take the *Record* and BRITISH BEE JOURNAL. 2. I put a super on the stock on May 3; I have also supered the first swarm. The second swarm is working in shallow super and doing well. The stock and first swarm have failed to enter supers. Can you tell me where I have failed in the stock and first swarm, as I meant to go in for extracted honey? 3. When I examined the stock last Monday, 13th inst., I found that they had no brood, and I could find no queen, so I gave it one frame of brood with queen-cell capped from first swarm. I found a dead queen outside of swarm No. 1, which I enclose. Do you think it is possible that it is the young queen belonging to the stock? I enclose name and address, and sign—WALLASEY, Liscard, June 19.

REPLY.—1. The bees sent are the common ones with a trace of Italian in them. The small shiny bees are robbers. 2. It is not surprising that the bees in stock have not entered supers, considering that the hive has been so depopulated by swarming three times. Super should have been put on swarm when it was hived to induce it to take to it at once. 3. The queen is a young one and is probably the one from the stock.

[3475.] *Broodless Stocks.*—I had three stocks swarm in May. I then gave each stock more room to prevent cast coming out, but despite my efforts each one threw a cast. A friend advised me to cut out all queen cells before returning cast at night. This I did to each hive. On examining hives yesterday I could not find a trace of brood in either of them, and it is a fortnight since I returned casts. Does this mean they are queenless? I took a frame of brood from each swarm hive and placed in centre of brood-nest of parent hives for them to raise a queen. Have I done right? Am very grateful for help received in reading B.B.J.—ANXIOUS, Salisbury, June 21.

REPLY.—Under normal conditions young queens usually mate at from three to five days after leaving cells and commence to lay 48 hours afterwards, but this period is sometimes prolonged, and cases have been known of fertilisation being deferred for fifteen to twenty-one days. You have done quite right if there are eggs or young larvæ not more than three days old in the comb of brood that you have introduced.

[3476.] *Swarms Uniting.*—As I do not wish to increase the number of my colonies, I have been doing everything possible to prevent swarming, and early last week I examined some of my hives for the purpose of cutting out superfluous queen-cells. During the interval that I was away from this work, a very strong swarm issued from one of the hives which had not as yet been dealt with. It clustered in an awkward position for taking single-handed on a post, close to some raspberry canes. I therefore asked Mr. A. Rudd, who is more experienced in such work, to help me. Whilst we were trying to find out from which hive it had come, another large swarm issued and settled at the bottom of the former, thus making one cluster over four feet in length. We divided this cluster so as to get it into two skeps, intending, after the removal of the queens, to return the bees to their respective hives, but after a time the bees worked out from one skep and joined those in the other. They were a very long time in doing this. We were in great doubt as to what had become of the queens, but later on discovered one of them on the ground in an injured condition. We noticed that a large number of the bees did not draw into the skep, but remained in clusters outside it. On raising the skep we found that it was completely full, which accounted for the great number remaining outside. It was hopeless to return the bees as we had wished, and so we determined to put the combined swarm in one new hive, in which I had placed ten frames of drawn-out comb, and there are more than sufficient bees to cover all of them. I should be glad if you would tell me what course I

ought to have adopted under the circumstances, bearing in mind that I do not wish to increase the number of my stocks.—W. A. D., Cobham, June 21.

REPLY.—As you did not desire increase your best plan would have been to remove frames of brood and place frames fitted with foundation, thus giving queen room for egg-laying. To prevent swarming, bees should never be cramped for room and should have plenty of ventilation.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

July 14 and 15, at Grimsby.—Show of Honey, Hives, and Bee Appliances in connection with the Lincolnshire Agricultural Society. Bee Department under the management of the Lincs. B.K.A. Fourteen classes Liberal money prizes and silver medals. Schedules from R. Godson, Hon. Sec. Lincs. B.K.A, Tothill, Alford, Lincs. **Entries closed.**

July 27, at Henbury, near Bristol.—Annual Show of the Henbury District Bee-keepers' Association in connection with the Horticultural Society's Exhibition. Several open classes with good prizes (two classes with free entry). Schedules from the Hon. Sec., J. Atkin Waller, Pen Park, Westbury-on-Trym, near Bristol. **Entries close July 23.**

July 27, at Paignton.—Annual Show of Honey, Wax, and Appliances, of the Devon Bee-keepers' Association, in conjunction with the Exhibition of the Paignton and District Gardeners' Association. Thirteen open classes. Schedules from the Hon. Sec., C. E. Scholefield, Heathfield, Chudleigh, S. Devon. **Entries close July 22.**

July 27 and 28, at Cardiff.—Glamorgan B.K.A. Show of Honey, Wax, and Appliances in connection with the Cardiff and County Horticultural Society. Prizes (open to non-members) for Comb and Extracted Honey, Appliances, Frame Hive, Wax, Observatory Hive, and Comb in Fancy Design. Medals and money prizes. Schedules from Wm. Richards, Gabalfa, Cardiff. **Entries close July 21.**

July 29, 30, and August 1 and 2, at Southport.—Annual Show of the Royal Lancashire Agricultural Society. Liberal money-prizes are offered for honey along with silver and bronze medals of the B.K.A. and also of the Society. Open classes for Honey-Trophy, Sections, Extracted Honey, Beeswax, Honey-Confectionery, Bee Flowers, Instructive Exhibits in Bee-Culture, &c. Schedules from Edward Bohane, Secretary, Miller-arcade, Preston. **Entries finally close July 6.**

August 1 (Bank Holiday), Windsor District, Berks B.K.A.—Annual Show of Honey and Bee-Appliances in conjunction with the Clewer Horticultural Society, in the grounds of Clewer Manor (by permission of E. B. Foster, Esq., J.P., C.C.) Open classes for Observatory Hive, Twelve 1-lb. Sections, and Twelve 1-lb Jars Extracted Honey. Also classes for Berks only, and for Windsor District only. Schedules from W. S. Darby, Hon. Sec, Consort Villas, Clewer. **Entries close July 23.**

August 3 to 5, at Huddersfield.—Show of Honey, &c., in connection with the Royal Yorkshire Agricultural Society. Schedules and form of entry from Hon. Sec, John Maughan, Blake-street, York. **Entries close June 25. Late entries at double fees up to July 2.**

August 4, at Kingsthorpe, Northants.—Honey Show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar of honey. (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Hon. Sec., Kingsthorpe, Northampton. **Entries close August 1.**

August 10, at Wye.—Kent Honey Show.—Several classes for Extracted and Comb Honey, Trophy, Wax, Mead, Cakes, &c., &c. Liberal cash prizes and silver medals. Open Classes for Single 1-lb Jar Extracted Honey (Light); Ditto (Dark); Single 1-lb. Section, with prizes of 20s., 10s., and 5s. in each class. Bee Demonstrations, Horticultural Show, Cycle Sports, &c. **Entries close August 5.** Schedules from J. Tippen, Secretary, Wye, Ashford, Kent.

August 13, at Lancaster.—Show of Honey, &c., in connection with the Lancaster Agricultural Society's Annual Show. Open classes for six sections, also six 1-lb. jars; and beeswax. Local class for three shallow frames. Lancs. B.K.A. silver and bronze medals and other specials. Schedules from Thos. Armitstead & Son, Lancaster.

August 24, at Fleetwood.—Honey Show in connection with Fleetwood Floral and Horticultural Society. Open classes for Six 1-lb. Sections. Six 1-lb. Jars Light Extracted Honey, and Six 1-lb. Jars Dark Extracted Honey. Schedules from Edward Cook, Hon. Sec., Rossall Grange Farm, Fleetwood. **Entries close August 14.**

August 24, at Sandbach.—Honey Department of the Cheshire Agricultural Society's Show, under the management of the Cheshire B.K.A. Open classes for Hives, Sections, and Extracted Honey. Substantial prizes. Bee Lectures and Demonstrations on the show-ground Schedules from T. A. Beckett, St. Werburgh's Chambers, Chester. **Entries close August 3 (at double fees August 10).**

August 24, at Bradford Abbas, Dorset.—Annual Show of the Yetminster and District B.K.A. in the old Vicarage ground. Three open classes, including three 1 lb. jars extracted honey and three 1-lb sections. Schedules (with entry form) from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne, Dorset. **Entries close August 20.**

August 24 and 25, at Leamington.—Annual Show of the Warwickshire B.K.A. in connection with that of the Warwickshire Agricultural Society. Schedules from James Noble Bower, Hon. Sec., Warwickshire B.K.A., Knowle.

August 25, at Llangollen.—In connection with the Sixth Annual Flower Show. Open classes for Six 1-lb. Sections, Six Jars Extracted Honey, and Beeswax. Schedules from Frank Little, **Brook Bank,** Llangollen. **Entries close August 11.**

August 27.—Twelfth Annual Show of the South of Scotland Bee keepers' Association. Five open classes for extracted and comb-honey and wax. Schedule and entry form from Hon. Sec., S. M'Vie, Essex Park Cottage, Dumfries. **Entries close August 20.**

August 30, at Cartmel, Lancashire.—Honey show in connection with the 32nd Annual Show of the Cartmel Agricultural Society. Three open classes for Comb and Extracted Honey (prizes, 15s., 10s., 5s., and 2s. 6d.), and Beeswax (prizes, 10s. and 5s.), along with silver and bronze medals of the Lancs B.K.A. Schedules from W. Cragg, Secretary, Cartmel, viâ Carnforth. **Entries close August 18.**

September 15, 16, and 17, at Crystal Palace.—Surrey Bee-keepers' Association Annual Exhibition of Bees, Honey, Wax and Appliances, &c. Twenty-five classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, Secretary, Marden House, Redhill, Surrey. **Entries close September 1.**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

F. H. H. (Wroxall),—1. The queen is a young one. 2. No doubt the old queen had been superseded, and this would be the reason why no brood was found. 3. Much depends upon the weather and

when the swarm issued. Under normal conditions eight or nine days, but if the swarm is from any cause delayed the young queens may leave their cells very much sooner. Young queens leave cells usually on the sixteenth day from the time the egg is laid.

*** We have received a shot shrike or butcher-bird (*Lanius excubitor*), whose crop contained remains of drone-bees and beetles on which it had been feeding. No name or address is given, so we do not know where it comes from.

L. Collinge.—The plant sent is the bird's-foot trefoil (*Lotus corniculatus*), and is good for bees. We should be pleased to have the bee-notes.

T. J. (Rothesay).—Remove the octagon supers with the bees in them and place on top of frames, closing over the exposed corners. Then drive out any bees that may be in the hive, and let them run in at entrance. When the bees have taken to the frames, you can remove the supers, one at a time, and get the bees out with a super clearer.

Streatham (S.W.).—The reason for comb against the side of hive is that there was too much space between the last comb and the side. Should the comb be built unevenly, or be thicker where honey is stored than where there is brood, the bees would leave proper space between this and fill up the rest with comb. This should be removed and care taken to have the frame the proper distance from side of hive.

East Kent (East Croydon).—There is considerable difference of opinion; some think they are a success, while others condemn them for their liability to curl.

Cymro (South Wales).—We should be pleased to see the floor-board and swarm-catcher. The registration of a design covers all that is shown in illustration, but not any motions or mechanical arrangements. Making anything exactly like the illustration would be an infringement. We do not think yours is any infringement, as it is different. We have had no further reports on swarm-catcher than those that have appeared in B.J.

T. L. (Mountain Ash). — The queen in letter reached us perfectly flat, but from the appearance of wings she is not very old. You did right in uniting if you did not require increase of colonies, otherwise you could have introduced a young queen. A queen with a broken leg would be useless.

Doubtful (Cheshire).—1. You can do it any time during the spring or summer. Your bees were doubtless preparing to supersede their queen. Queen-cells with cappings hanging down denote that the queens have emerged. 2. Yes. 3. You should have done it either before or when queen-cells were first started. You will find it more difficult to get the bees to accept one now they have several young ones. 4. As young a fertile queen as you can get. 5. If the bees are superseding the old queen she would not be good enough to give to a nucleus. 6. Twenty-four hours, but usually the queen is fed by the workers through perforations in cage, or cages are made provided with food. 7. No; but it sometimes retards her laying. 8. It is the piping of the young queen—generally indicative of early swarming.

W. S. B. (Blackpool).—Your best plan is to follow the directions in "Guide Book," page 132, referring to introducing queens to swarms, or one of the other methods by means of cages after bees are established on combs. Your plan is too risky. The feeder is already fully described on page 233, and we do not see how it could be made clearer.

W. G. (Chertsey).—The nursery cage contains a feed-hole which should be provided with soft candy, made by mixing together liquid honey and finely-powdered loaf-sugar until the consistency of dough or stiff putty is reached. Put no bees in the cages, but keep warm.

T. Y. (Bristol).—Add a little water and boil for half an hour, then put in some naphthol beta solution in the proportions recommended in "Guide Book." The honey will keep until autumn and can then be used as you propose.

Apiarist (Cheltenham).—An illustration and description how to make a solar wax-extractor appeared in B.J. on February 23, 1899, and copy of the paper for that date can be had at this office for 1½d.

Beginner (Farnham).—No doubt your hive is queenless, as you destroyed all queen cells when bees swarmed and they have failed to rear another. You will find full instructions as to uniting bees in "Guide Book," and you will not find it a very formidable undertaking if you properly carry out instructions.

F. H. (Leicester).—Your colony was evidently not strong enough for swarming artificially, and as nearly all the bees returned to the old spot it shows that there were too few young bees to care for the brood. As this has become chilled your best plan is to unite the remaining bees to your swarm and get rid of the combs of chilled brood.

Press Correspondent (Sheffield).—Place the skep over a movable comb hive and close the openings at the corners so as to

prevent bees escaping. The bees, if they do not swarm, will transfer themselves into the frame-hive. See fuller instructions in "Guide Book" page 140.

LLANELLYITE (Llwynhendy).—The plan you propose of turning the hive to the east will do, but you must close one of the entrances. If the bees are united previously they should be peaceable in the supers, not otherwise. As soon as the young queen begins to lay you can take away the old one.

A. B. (Downton).—Presuming there was a young queen, she would take her wedding flight from third to fifth day after emerging from cell, unless delayed by unfavourable weather, and would commence to lay about two days later. In all, about seven days; but there are known cases where laying has been delayed for twenty-one days.

NOVICE (Yorks).—1. Yes, your hive is probably queenless, and should have another queen introduced. 2. If the bees are not by this time transferring themselves it is a sign that the skep is not strong enough in bees. Leave them a little longer. Requeening a weak colony of bees is not advisable; better unite them to another lot.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul brood."

We urgently request that all letters sent with samples of suspected comb be put outside the box or tin containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.

In urgent cases (and where possible) we undertake to "wire" replies as to F B if six stamps are sent to cover cost of telegram. All letters should be addressed "Editors," not "Manager."

J. B. (Cardiff).—The piece of comb sent contains principally chilled brood, but two cells show that foul brood is developing.

CYMRO (Flintshire).—Very bad case of foul brood, and as the bees have dwindled to a few hundreds they are not worth preserving.

E. K. (Isle of Man).—The comb sent contains cells of foul-brood as well as chilled brood. Owing to parcel being sent to wrong address, it did not reach us until last number of B.J. was published.

ANXIOUS B., who sends a specimen of comb very badly affected with foul brood, does not give his address or name, and we would remind him that it is against our rules to notice anonymous correspondents.

A. L. (Ringwood).—Foul Brood.—If your colony be weak, destroy bees, combs, and frames. If strong, make a swarm of the bees, confine for forty-eight hours, then feed with medicated syrup. Afterwards they can be united as proposed. Wash excluder zinc with boiling water and soap and destroy cloth.

J. C. (Belfast).—Send a sample of fresh brood. That sent must have been dried up a long time, as there is no trace of anything in the cells.

CUMRAES (Castleton).—The few capped cells contain chilled brood, no doubt from having been abandoned by the bees. Uncap cells, take out contents, and spray combs with soluble phenyle solution. Soluble phenyle can be got from Morris, Little, and Co., Doncaster, or of all chemists. It is safer for the purpose than carbolic acid. Naphthol beta is not suitable. It does not dissolve in cold water and is only sparingly soluble in hot water.

ANXIOUS (Warwickshire).—Advanced Foul Brood.—As your other colonies are healthy we should advise destruction of this colony, as it may save future trouble.

BRIDGE OF ALLAN (Scotland).—Chilled Brood.—No; it does not develop into foul brood, but in that it weakens a colony it helps to create conditions favourable for foul brood disease germs to get a footing.

COTSWOLD (Gloucester).—Both combs have foul brood and all such should be destroyed. Treatment will depend on strength of colony, for if weak in bees it would be better destroyed.

ESKDALE (Cumberland).—Chilled brood, but there is one cell containing foul brood in its earliest stage. 1. No, what you see is probably dried pollen. 2. On hands and clothes. 3. Everywhere, so greatest care is needed.

Special Prepaid Advertisements.

Twelve words and under; Sixpence; for every additional Three words or under, One Penny

SPECIAL NOTICE.—Orders for three or more consecutive announcements in above are inserted in our monthly, the "Bee-keepers' Record," free of charge.

Trade advertisements of Hive Manufacturers and Dealers in Bee-goods, not available for "Prepaid" column, are inserted immediately below "Prepaid" at a minimum charge of 2s. per half-inch space, or 3s. 6d. per inch; orders for "repeat" or continuous advertisements having free insertion in "Record" as above.

Advertisements for current issue must be received by first post on Tuesday.

FEW DOZEN built-out COMBS in Shallow Frames. Healthy. 8s. dozen. H. WITT, Ascot, Berks B 77

SPLENDIDLY-MADE FRAME HIVES and APPLIANCES, some not been used, FOR SALE. Cheap or Exchange Poultry. Early-hatched Chickens preferred. Write for particulars, WILLIAM JOHNSON, Uplands, Birtley, R.S.O. B 80

NEW SECTIONS WANTED. Best quality. T. SMITH & Co., Cambridge-street, Hyde Park, W. B 73

Editorial, Notices, &c.

THE ROYAL SHOW.

Owing to a printer's error in our issue of last week—not discovered till too late for correction—the grouping of counties in the several classes of prize-list was not specified. We are glad to put this right, not only for the sake of making the various awards more clearly understood, but as affording the opportunity of expressing our disappointment at the result of this second attempt to remove the oft-repeated and no doubt just complaint of the unfairness of the old arrangements of classes at the "Royal" Show, whereby certain counties stood no chance on the show-bench when competing with counties more favoured in the matter of bee-forage. As is well known, the B.B.K.A. made a bold and somewhat costly experiment to remedy this state of things in the grouping system, and confidently expected that the increased entries would cover the increased outlay. But for some reason not easily accounted for, the members of County Associations have failed to take advantage of the altered schedule, and the consequent result to the parent Association has been bitterly disappointing, to say nothing of the financial loss. It, therefore, becomes a serious question, in view of the future, because if there seems to be no appreciation of the well-meant effort to remove the clearly-expressed complaint of unfairness, there will be no alternative but a return to the former classification, unless more justification is shown for the heavily-increased expenditure on prizes.

The following is the grouping of counties as arranged in classes of prize-list published last week:—

(*Classes* 412 *to* 415 *confined to Cornwall, Devon, Somerset, Dorset, and Wilts.*)

(*Classes* 416 *to* 419 *confined to Berks, Hants, Isle of Wight, Surrey, Sussex, Kent.*)

(*Classes* 420 *to* 423 *confined to Suffolk, Essex, Bucks, Middlesex, Herts, and Oxon.*)

(*Classes* 424 *to* 427 *confined to Norfolk, Cambridge, Hunts, Beds, Leicester, and Northampton.*

(*Classes* 428 *to* 431, *confined to Glos., Mon., Worces., Hereford, Warwickshire, Salop, and Wales.*

(*Classes* 432 *to* 435 *confined to Notts, Lincs, Rutland, Cheshire, Derbys, Staffs, Yorks, Lancs, Northumberland, Durham, Cumberland, Westmoreland, the Isle of Man, Scotland, and Ireland.*)

While on the subject of the "Park Royal" experiment, it may be well to add a word of regret—which will be shared by many readers—at the very disappointing result of the attempt of the Royal Agricultural Society to establish a permanent show-yard in London. With everything in its favour this year, including the all-important desideratum of beautiful weather all the week, along with musical and numerous other attractions, and a greatly improved condition of the show-yard, the daily attendances show that Londoners take little interest in agriculture, the number of visitors paying for admission at the turnstiles being the smallest for twenty-one years. The following table shows the falling off this year compared with last:—

	1904.		1903.
Tuesday	2,011	...	2,685
Wednesday ...	9,375	...	12,057
Thursday	10,912	...	11,403
Friday	14,175	...	20,567
Saturday	16,457	...	18,299
Total	52,930	...	65,013

By way of further comparison we add the total attendances at the previous three shows as under:

1902—Carlisle:	Total visitors ...	93,187
1901—Cardiff	,, ,, ...	167,423
1900—York	,, ,, ...	87,511

The highest attendance at any one show of the "Royal" was at Manchester in 1897, when the enormous total of 217,980 was reached.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "THE EDITORS of the 'British Bee Journal,' 10, *Buckingham-street, Strand, London, W.C." All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 10, *Buckingham-street, Strand, London, W.C."

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

RATE OF BEES' FLIGHT.

[5564.] This is a point on which it would be rather unsafe to lay down hard and fast conclusions; and, perhaps, the highest speed at which they can fly will always remain a moot point. I have said *perhaps*, as it is only a few years ago since an eminent writer on bees emphatically

declared that the length of a bees' life would never be accurately determined, whereas we know now that reliable data can be obtained on the subject. I have seen the limit of a bee's flight put as low as ten miles an hour, but this is manifestly under-stating the case. Travellers in a coach often find bees pass them when travelling at about that rate, and relatively may judge their speed at double their own. Here we have something reliable to reason from, and it conclusively proves we may safely set it down as an incontrovertible fact that bees can travel at the rate of twenty miles an hour. A friend who encountered a runaway swarm supplies me with the same logical inference from the fact that he paced them on his bicycle for a mile until they deviated from the course he was travelling. I have what I consider fairly reliable proof that they can travel thirty miles an hour, but I can adduce no evidence to prove it. While I believe that they *can* do so, however, I am quite confident that they very rarely do. My belief is that, though in making for the foraging grounds, they easily travel a mile in three minutes, yet on their return they frequently take double that time; and I know, on occasions, they may take ten minutes. I have watched them hundreds of times approaching home heavily laden, and I know that for a considerable distance I have paced them at the above speed. In watching them leaving or returning to their hives, I made elaborate observations for given distances, and these bore me out in these conclusions. Yet I will not dogmatise on either point, because I know that climatic and other influences have to be reckoned with, and I believe their average rate of speed differs with the varying seasons of the year, and, of course, with the object the bee has in view when making its aerial flight.

Vitality of Bees.—I have read some wonderful tales about the recuperative powers of bees, and of their being restored to life when apparently dead; but several experiments I have made failed to prove the truth of some of these statements. A quite common way of depriving bees of their stores about a century ago was to immerse the whole mass in water, when the "drowned" bees were laid aside, and the honey appropriated by the bee-keeper at his leisure, much as when fumigation by puffball was employed for the same purpose. Reaumur records that thus immersed for nine hours bees fully recovered, and seemed none the worse. Dr. Evans states that he left bees by mistake for *eighteen* hours, but that when spread out to dry, under the influence of a bright, warm sun, they recovered after some time, and flew back to their hives. Two other instances may be given of the recovery of apparently dead bees. A bird being shot, 171 bees were taken out of its crop, of which 54 after some time recovered, and flew away seemingly all right. Some bees were left under an exhaustion air-pump for twenty-four hours and survived.

Vitality of Bees' Eggs.—Dr. Bevan, in his "Honey Bee," says of eggs found in a hive in early spring: "They might have been laid late in the autumn, and have remained stationary till spring. Riem states that in a bad season "eggs will remain in the cells many months without hatching." Huish, too, believed that eggs laid in late autumn remained dormant during the winter, and hatched out in spring; and he even declared that a dead stock could be "resurrected" from the eggs left in the cells by a queen long dead, and that hives in which the bees had died out were an invaluable asset for this reason when preserved and used for hiving swarms. In regard to all the three statements I have to declare myself an infidel. The point is, however, an interesting one, and I should like to have some statements from reliable authorities who have made observations on the vitality of eggs laid by a queen in a hive suffering from a paucity of bees, or otherwise not brought to full fruition in the regular course. How long would they endure suspended animation without becoming sterile?

Drone Eggs and Queen Cells.—Another point I should like to elucidate is: What is the exact relation between the laying of drone eggs in early May and the starting of queen cells about the opening of June? Is there a distinct co-relation which almost invariably decrees that, if the queen lays a considerable batch of drone eggs due to hatch, say, the first week of June, queen cells, in normal circumstances will be started in the closing days of May, leading in all likelihood to a swarm before June 10? Ancient beemen had a decided opinion that the appearance of these drones was a sure indication of an early swarm; but perhaps modern methods may have eliminated the instinct, so that effect may not now so surely follow cause. —D. M. M., Banff.

FOUL BROOD LEGISLATION.

[5565.] In reference to what Colonel Walker writes (5560, page 254), I am glad to have the opportunity to acknowledge the valuable assistance the B.B.K.A. 1896 Draft has been in drafting the present Bill, which is practically the same brought up to date.

He mentions the need for closer relations between County Councils and Associations. Too much importance cannot be

attached to this. The former are the recognised legal authorities for technical education, whereas our associations have no legal standing, but they can exert their influence on the County Councils so that the latter will depute their powers, and the teaching of bee-keeping, with suitable grants, to the associations.

Mr. W. Woodley asks that we should inquire into the results of legislation in Canada. These are constantly being stated in *Gleanings*, and the small percentage of disease which may recur again after treatment can be put down to the system there in use — namely, the "McEvoy," which does not include the disinfection of hives, in which the "Cowan" method is superior.

If Mr. Woodley will kindly refer to my circular (No. 4) he will find that the present move for legislation does not contemplate Government inspectors with large yearly salaries. We propose that our own association-paid experts have the power delegated to them by the County Councils in order to deal with the few awkward bee-keepers who wilfully keep centres diseased, and also to be able to compensate all those who have their stocks treated.

Mr. W. J. Farmer writes (page 254) under considerable misapprehension of our proposed Bill. I am therefore sending him full particulars, and trust that he will write further to the B.B.J. A very large body of bee-keepers are asking for legislation. A vote taken through the B.B.J. would not be representative, as, unfortunately, I am afraid only a comparatively small minority of bee-keepers take it in. As to Cumberland, I can speak definitely.

My stock of "Foul Brood" Bills being nearly run out, and owing to the demand there still is for them, I am, on Thursday, the 7th inst., receiving "proof" from printers of a cheaper edition, and would be glad to hear as soon as possible from hon. secretaries and others wishing to urge the matter on County Councils as to the number each requires.—GEORGE M. SAUNDERS, Hon. Secretary and Treasurer Cumberland B.K.A., Dowthwaite, Keswick.

[Without over-estimating the influence of the B.B.J. on the bee-keeping opinion of the whole kingdom, it is satisfactory to learn that Mr. Saunders speaks for Cumberland only, and it does not say much for the bee-keepers of that county if it is to be understood that only a "small minority" of them "take it in." But this assertion does not alter the fact that the great majority of progressive bee-keepers *do* read our journals, as the large circulation proves beyond dispute. On this point we may also be permitted to say that if one-tenth of our readers were to express their views they would represent those of the bulk of the intelligent opinion of this country on the subject, notwithstanding what appears like a somewhat gratuitous desire on the part of our correspondent to belittle the influence of the JOURNAL referred to.—EDS.]

[5566.] I was sorry to note the tone adopted by your correspondent, Mr. W. J. Farmer, in his remarks on "Foul Brood Legislation" (5561, page 254), and before he airs his evidently limited experience of the malignant bee disease in question I would beg him not to place himself on the platform of the scorners, but rather use his energies in the way that might assist the "small section of bee-keepers trying to secure legislation." Contempt for small things has been the rule since the world began, and will probably continue while it lasts. But while admitting the impossibility of pleasing every one, it is to my mind much to be regretted that any person of an apicultural turn of mind should educate himself against the importance of proper methods of management, or pooh-pooh the efforts of bee-keepers whose endeavours are used for the benefit of the bee-keeping community as a whole. Many great things have had small beginnings, and it is to be hoped that the effort now being made will hasten the time when something can be done for the general welfare of apiarists who are fighting the disease which annually appears owing to the fact that there are hives whose owners care nothing about, but allow them to go on year after year, and will neither allow inspection nor take any precautions by which the disease might be kept under control or overcome. I should like to ask: would Mr. Farmer derive any pleasure in telling an ardent apiarist that his bees were affected with disease? Would it give him any enjoyment to witness the pained look on the face of their owners, as I have myself so often seen? No doubt the system of management advocated by Mr. Farmer is very good, but I fear he would forget same if the larvæ in combs were seen dying by the score; especially so if it occurred in his own apiary, and probably caused by the negligence of a neighbouring bee-keeper. In most diseases to which animal life is subject the disease can be isolated; but isolation is an impossibility with bees, as all practical bee-men know full well. I have no doubt that Mr. Farmer would be pained if he could see hives that have come under my notice as an expert, the combs of which were simply masses of corruption from foul brood.

Only last week I examined an apiary be-

longing to a working man, who a few months previously had purchased three hives for £2 10s., all of which were diseased, one so badly that immediate destruction was advised. Could any one be surprised if that man gave up keeping bees in disgust, and also use his influence and prevent others from having anything to do with the pursuit? Would Mr. Farmer condemn legislation in this case, which is unfortunately only one of many, and still advocate bringing only voluntary effort to bear on the individual bee-keeper, who too often either good naturedly smiles at your ideas of education, or else snaps his fingers at your suggestions, and generally treats advice with contempt?

In 1896 the British Bee-keepers' Association used every means to secure legislation on the subject of foul brood, and although neither time nor expense was spared, yet, to their great disappointment, it proved a failure. Now, however, we need not be cast down and condemn the action of the "small section of bee-keepers," but remember "where there's a will there's a way."—JAMES WADDELL, Expert, B.B.K.A.

BEE NOTES.

[5567.] I once remember finding two queens in a hive whilst "driving" it in August, but I think this was owing to two swarms being put into one hive. I can quite agree with Mr. Woodley with regard to feeding, because my experience has been that stocks left on 30 lb. of stores to winter, have come out much stronger the following May, than others left with 20 lb. of stores and spring-fed. I have in my mind this season two skeps belonging to a friend which weighed 38 lb. and 45 lb. each, and I notice that they have swarmed a month sooner than bees owned by a curmudgeon who will never let his bees remain for stock if over 20 lb. weight!

Feeders.—For slow feeding I use a paint-can with a self-opening lid, pierced with small holes, and inverted on a piece of wood with a two-inch hole cut in it, covered with a piece of perforated zinc. This holds about half a pint, and costs about 2d. for the whole thing. My rapid feeder is of metal and holds about ten to fifteen pints of liquid. I have known driven bees to take down 30 lb. of syrup out of it in 48 hours.

Swarm-boxes.—A swarm-box should have holes bored in all the sides and end, covered with perforated zinc, and 1 in. thick strips of wood nailed also across the sides and top. This allows a certain amount of draught through, even if covered up by other packages while in the luggage van.

As to swarming versus non-swarming it is best to let the bees have their own way to a certain extent, because if we place the swarm back on the old stand with about three frames of brood and the remaining frames with whole sheets of foundation, we get nearly as much honey in supers as if the colony had not swarmed, while in addition we have a strong young stock, headed by a naturally raised queen.

Some dwindling is usually noticed in the early spring, and if we find that we have too many stocks in proportion to our appliances, and the time we can give the bees, it is always an easy matter to unite the weak ones. It seems to me that if bees are continually checked from swarming, they lose heart and vigour, but it is wonderful with what speed and determination a strong swarm will fill its supers. I therefore counsel: Let bees swarm if they wish to, for it is generally an easy matter to catch the old queen if one desires to do so, and return the swarm if a young queen and no increase is wished for. I notice that a queen which is very prolific one season is often not half as good during the next one; therefore if she swarms about mid-June it is no great loss to kill her at once and return the swarm.—APIARIST, Cheltenham, June 22.

FIGHT BETWEEN TWO QUEENS.

[5568.] I witnessed a few days ago an occurrence which has, I fancy, been so seldom seen as to deserve being put on record. On Monday, June 20, I hived a "second swarm," and before returning it to the parent proceeded to take out the young queens. Having turned up the skep in which the cast had been hived, I soon secured one young queen and went on to look for others, as I have sometimes taken out seven or eight young queens from similar after-swarms. It was not long before I got sight of another queen and was on the point of catching her when another crossed her path as she hurried over the heads of her subjects. The moment she caught sight of her rival, she rushed at her, and grappling together, both queens rolled over and over to the bottom of the hive, when the assailed queen extricated herself and disappeared among the bees. Both soon shared a common fate.

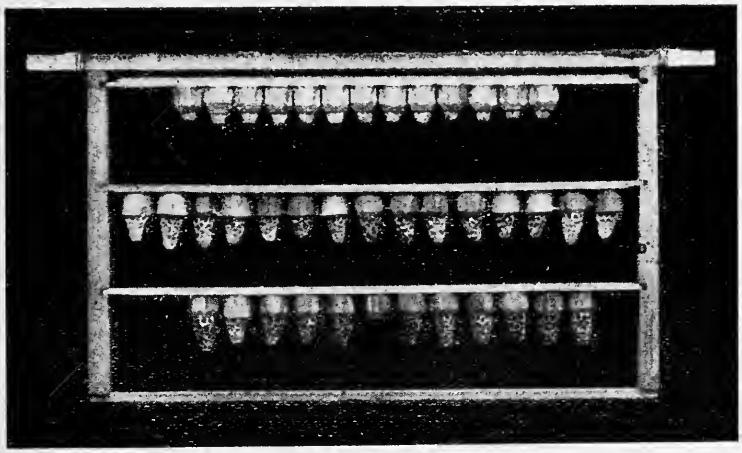
It is well understood, I believe, that when two or more queens are in a hive, they fight the question of supremacy out between themselves, the worker bees not interfering in the dynastic quarrel; but an encounter between queens such as I have described has surely seldom been seen. Perhaps some of your readers may have had a similar experience to mine?—A. A. F., Duns, June 24.

QUEEN REARING,

ANTS ATTACKING BEES, AND QUEENS LAYING IN QUEEN-CELLS.

[5569.] In accordance with a promise made early in the season, I now send a photo of a frame of queen-cells. The cells in the lower bar are nine days old, and you will see that one cell was refused by the bees. Those on the middle bar are five days old, and the top bar two days. I left the full fifteen cells on the middle bar for the purpose of this photo, as I consider twelve cells enough for a hive to give proper attention to.

The cell cups on the two lower bars are fixed according to the method described in B.B.J. by Mr. Sladen, and was also fully described by a Mr. Phillip in *Gleanings* some time previous to this set of articles appearing, and the illustrations are identical. Those on the top bar are a fixing of my own (not copied from *Gleanings*). The bar is part of a dovetail section, and tin slides are made to fit, with a second dovetail slide formed below at right angles to the top, and the cell cups have saw cuts run in at an angle to fit them. I find these are easier to take off the bar without jarring the nymphs inside. Of course, as each batch comes off the younger batches are moved down a stage so that the most recently set lot are always at the top. These cells are so plentifully supplied with food that one cell three days old will yield sufficient royal jelly to start thirty-six fresh cups. Even the shortest cells in the photo will have quite a quantity of royal jelly left after the queen has hatched. These wooden cell cups are a great advance on the "all-wax" kind, as they are even more readily accepted after the first time, by giving them to the bees to clean out and put in order for the next inhabitant.



QUEEN-REARING FRAME, WITH CELLS.

Coming to the second portion of my heading, have any of our readers ever witnessed the common red ant attacking bees? On Sunday last, when hiving a swarm, a few of the bees fell on an ants' nest, and my attention was directed to them by their peculiar actions; buzzing round and round as if held by something like a cobweb, and as if struggling to free themselves. One poor bee disappeared entirely in the loose earth as in a quicksand. I picked up one or two to see what was the cause of the commotion, and was surprised to find, in each case, a red ant holding on to one of the middle legs of the bee in a most determined manner. One bee I put on a board and it buzzed round and round in its ineffectual endeavour to free itself. I always thought ants in an apiary were harmless, but in future I shall wage war on their nests.

Reverting to the queens, some time ago some one wrote me asking if I had personal evidence of queens laying in queen-cells. If this should meet the eye of that correspondent he may be pleased to learn that I recently witnessed a queen struggling to deposit an egg in a queen-cell which was placed in an awkward position on a drone-comb. She was unable to deposit the egg, and the bees helping in the operation tore down the side of the cell cup to enable her to carry out her intention. I wished at that moment, more than any other time in my life, that I was a photographer (amateur, of course) to take some snapshots of the procedure. I had opened the hive without smoke for the purpose of ascertaining if the queen was there or if she was the one that had just swarmed, and this, no doubt, accounted for her continuing her

work without being interrupted.—D. G. TAYLOR, Ilminster.

BEE WISDOM.

[5570.] A few weeks since I overhauled one of my empty hives and carried home one of the "frames" which required a little manipulation in preparation for a "swarm" of bees I am expecting from Dorsetshire. The "frame" was placed on the sideboard in the breakfast parlour, and yesterday morning a "swarm" of bees took possession of this "frame" and made things very uncomfortable for the family. However, about midday the bees suddenly left the "frame" after a few of their number had repeatedly flown in and out, probably reconnoitring and following in the course in which I brought the "frame" home (about 400 yards from house, in an adjacent field), took possession of the empty hive, and are now happily "at home." Is this not a coincidence? Can any bee-keeper explain?—W. E. F., New Southgate, June 30.

QUEENLESS SWARMS.

[5571.] A few days ago I purchased from a well-known and thoroughly trustworthy dealer in bees a first swarm, which was sent to me in one of the usual travelling-boxes. They arrived about 6.30 p.m., and the bees seemed somewhat restless and noisy in the box, but I attributed this to the shaking they may have had on the journey. The frame-hive for the swarm being prepared beforehand, I proceeded to hive them, and, as usual, shook the bees out on to a sloping board, with raised sides and lower end. Every bee fell on to the board, and they duly ran into the hive. I always make a point, when hiving swarms, of watching closely in order to see that the queen runs in along with the bees, and on this occasion followed my usual practice. I could not, however, see her at all, though I am about certain that the queen was not either among the bees thrown out or left in the box. After the swarm had entered the hive I noticed they were very restless, and were beginning to run out again; this somewhat confirmed my opinion that there was no queen with the swarm, so I inserted with the least possible delay a frame containing eggs and larvæ in all stages. This, however, did not in the least improve matters, and until dark the bees were flying "all over the place." The next morning, early, I noticed that many attempted to, and apparently did, enter several of the hives close by. By evening, however, when I returned home, all was quiet. A peculiar feature of the case is that the bees had partly unsealed every covered cell of brood in the comb I gave them, and in a few cases had pulled the unsealed larvæ from the cells.

Now, Sir, I venture to ask you: What would you have done under similar circumstances? I have kept bees for 23 years, and I do not think I have ever felt so utterly helpless as on this occasion. I send name, etc., and sign—ROPSLEY, Duns, N.B., June 28.

[Under the circumstances, we should probably have acted much as you did; but one of two things seems certain—i.e., either the swarm was unaccompanied by their queen or she had taken wing—when the bees were being thrown out of the travelling-box—and been lost. With regard to the bees removing the brood-cappings, we have never known of that occurring except when they were starving for lack of food.—EDS.]

PROLIFIC QUEENS.

[5572.] Reading in your valuable paper notes respecting prolific queens, I herewith send you a report concerning one of mine. Last year I raised a young queen in a nucleus from an Italian queen I purchased from Mr. Sladen, Dover. She was hatched on August 11, and commenced to lay on August 16, and she quickly built the nucleus into a fair stock. They were packed for winter the beginning of October on seven frames, three of them containing brood.

This spring she has done remarkably well. My records say:—May 6, seven frames of brood; May 14, nine frames of brood; May 22, ten frames all covered from end to end with brood. They went up into supers on May 17. I had two racks of shallow-frames on, and hive raised off floor board allowing bees to get out all round. But in spite of this they sent off a swarm 5 lb. weight on June 12. The same day I made a nucleus with three frames of brood and queen cell from parent stock. On June 19 they sent off a cast 4 lb. weight. On June 21 another 3½ lb. lot came out. The parent stock to-day seemed fairly well filled with bees on all the frames. Is it not unusual for so many swarms from one hive? I should think there must have been nearly one hundred thousand bees in the hive. The prime swarm has already drawn out eight frames of foundation, and five of them are full of eggs and brood.—SALTLEY, June 26.

DRONES IN HIVES.

[5573.] With regard to your Carshalton correspondent's suggestion for getting rid of drones, allow me to say that I have tried the plan he suggests—placing a strip of excluder over the entrance when the

drones are out on the wing. The result was very unsatisfactory, for there was soon a tremendous scrimmage on the alighting-board, the drones hustling one another round the excluder. However, I let the melee continue, and the workers eventually succeeded in fighting their way home with the loss of much time and pollen. The next morning I went to the hive, expecting to brush up a nice little batch of corpses, but oh no, not at all! The stout gentlemen appeared none the worse for their night out and were still scrimmaging with unabated vigour.

By the by, why do not our manufacturers make a drone trap adaptable to the English hive? The alley trap supplied by nearly all of them is merely the American pattern intended for the floor-board of the Langstroth hive, and almost impossible to fit to an English entrance without a "leak" somewhere.—J. P., Walton-on-Thames, June 24.

ADVERTISING IN B.B.J.

[5575.] You ought to know that I have recently obtained an excellent gardener and bee-man (third-class certificate) through one advertisement in the B.B.J. Advertisements in the garden papers were useless.—E. Bartrum, June 17.

THE "RYMER" METHOD.

[5574.] A correspondent of the B.B.J. (June 16, page 235) gives a graphic account of the failure of the above system to prevent swarming, inviting others experimenting to give results. I herewith forward a record with two hives at our apiaries.

1. May 14.—Body-box being full of bees and brood, placed adapting-board on and surplus-chamber of standard frames with full sheets foundation.

June 11.—The bees having drawn out foundation, and surplus-chamber being full, put excluder on, also second box of surplus shallow frames, fitted with full sheets foundation.

June 22.—Between the two dates the bees sent off a swarm, which was lost, but a cast was secured, after nearly finishing, drawing out foundation in top surplus-chamber.

2. May 16.—Put adapting-board on, and rack of shallow-frames fitted with full sheets of foundation.

June 4.—Put on excluder and second lot of shallow-frames with foundation.

June 23.—Bees swarmed after filling top boxes about two-thirds.

Although the whole of the stocks in skeps have sent off swarms, I have not had one from any of the bar-frames at home up to the present. Trying to prevent swarming by orthodox methods advocated so often in B.B.J. and "Guide Book."—David Hancox, Deddington, June 27.

Queries and Replies.

[3477.] *Bees Dwindling.*—Can you give me any reason for bees dwindling in one of my hives? I purchased it a year ago, and it was then, and even on till this spring, very strong in bees. The boxes (three in number) were out of date, being only 14 in. square by 6 in. deep, and the combs built every way in them, so I decided to do away with them in favour of the shallow-frame. In the spring I took away the bottom box and put in its place one filled with sheets of foundation. I was not particular as to getting surplus so long as I got them properly transferred into the shallow-frames this season. However, since that time they have gradually dwindled. I thought at first the queen might have got lost, but since the wet weather started I have noticed several young bees thrown out on to the alighting board. Hoping that we may have a good season, etc.—North, Ayr, June 21.

Reply.—You should examine the hive and see if there is any brood or stores, or even whether there is any disease. Dwindling may proceed from failure to raise brood and casting out young bees—if immature—is generally a sign of scarcity of food.

[3478.] *Suspected Queenlessness.* — On giving one of my stocks a clean hive on May 11 I found a good deal of drone-brood, no worker-brood, and no signs of a queen. Failing to get a queen, I inserted two frames of worker-brood and eggs from two strong hives and took out two old combs. On June 14 I examined the hive again and found a queen-cell with the cap off and a new queen on one of the combs. At the same time I took away another old comb and inserted a frame of foundation in its place. On June 30 I once more examined the hive, and though there was a very small amount of worker-brood, hardly any honey had been brought in; the foundation given on June 14 was also only very partially drawn out, and no queen was to be found, though each comb was carefully examined three times. Not liking the look of the combs, I took away two more, and gave two frames of foundation in their place, on the chance of the queen being there in spite of my failure to find her. In the event of the hive proving queenless, can you suggest a reason for the disappearance of the queen? The fact that there was worker-brood proves that she had

been out for her mating flight, and returned safely; otherwise I concluded that she had been snapped up by a bird while in the air. By this post I am sending you a comb taken from the hive to-day, and should be glad of your opinion upon it. — HULTON H. KEMBLE, Ambleside, June 30.

REPLY.—As worker-brood was found in the combs, we see no reason to suppose that the stock is queenless. A further search a week or so hence would, however, decide the question, because if brood is found no trouble need be feared from not seeing the queen. Regarding the comb sent, the sealed cells contain nothing worse than heather honey.

[3479.] *Swarms Decamping.*—On June 4 I had a large swarm from a frame-hive. The bees settled on a bush, and I had not any difficulty in hiving them into a box, which was placed on a stand, whilst I went to get a hive ready to receive the swarm. In an hour, however, the bees began to leave the box, and the whole swarm decamped, and I could not see the direction they took. Yesterday I had a similar experience with a swarm belonging to a neighbour from whom I purchased my original stock. His bees swarmed about 10.30 a.m. They were hived and placed on a stand, and they apparently settled down; but about 1.30 p.m. they took flight and were lost. I may say the boxes used to hive the swarms in temporarily (while preparing the frame-hives for their reception) were cheese-boxes, similar to some in which my neighbour has kept bees for several years past. I therefore ask:—1. Do you consider that there might be something in the box distasteful to the bees which caused them to fly away? 2. If not, do you consider it might be a peculiarity of this particular strain of bees to decamp after being hived, as I understand this is the fourth swarm which has flown away recently? I send name, and sign myself—IGNORAMUS, Troutbeck, June 30.

REPLY. — 1. If the cheese-boxes used had not been cleaned out, or means taken to remove the strong smell of cheese they would no doubt have, it would readily account for the swarms desert ng them. The best thing for use in hiving swarms temporarily in is a clean straw skep, and one or more of these should form part of the stock-in-trade in every apiary. We never knew of bees inheriting the decamping propensity. In fact, where proper means are taken in hiving, swarms very rarely fly off after hiving.

[3480.] *Failure in Nucleus-forming.*—I herewith send you a queen-bee and enclose the following particulars regarding her:—On May 19 I formed a nucleus, transferring some combs of brood, with bees, to an empty hive. The bees raised two queens (there are two empty cells), of which this is the survivor. She has, however, failed to lay any eggs, drone or otherwise. How is this to be accounted for? The bees in the hive have gathered a good deal of honey and stored a quantity of pollen. A curious thing occurred in the hive from which I formed the nucleus. It is exceedingly strong, with a very good queen. In one of the supers I found three cells with drone brood, and another cell of this form and size, which contained a grub at the extremity. There is a queen-excluder on. Can eggs have been carried up by the workers? The combs in the supers are on drone foundation. I have put some more brood-combs with eggs into the nucleus and hope they may now rear a fertile queen. There were no queen-cells in the hive from which I took it. Can you explain the case? If so, I will be obliged.—WALTER DE H. BIRCH, Preston, July 3.

REPLY.—The queen-bee (dead when received) bears the appearance of having been roughly dealt with, either by her sister bee or otherwise, and as one segment of the abdomen is indented, her ovaries have probably been ruptured, so that would account for the failure in egg-laying. There is strong evidence that bees do at times carry eggs as you suppose.

REVIEWS OF FOREIGN JOURNALS.

By "*Nemo.*"

In *The American Bee Journal* there is a report of the Inspector of Apiaries for the Province of Ontario. In it he gives the result of his work in dealing with foul-brood for thirteen years, and claims that he has "driven over 90 per cent. of the disease out of the Province since 1890." He also says: "The disease is now completely under control." This, however, does not seem to be borne out by the discussion which ensued, and Mr. J. C. Morrison questioned whether foul-brood was on the decrease. But so were bee-keepers, he said. Five years ago Mr. McEvoy cleaned the apiary of John Kidd, and this year foul-brood "cleaned" him. Five years ago he "cleaned" an apiary at Craighurst; this year he "cleaned" the same apiary by the firing method, and justly so. Mr. Morrison further mentions a number of places in his own county of Simcoe where foul-brood exists, and gives the following figures of decrease as shown in the inspector's own reports. He visited in—

1899, in 13 counties, 126 apiaries, of which 40 were foul.

1900, in 12 counties, 100 apiaries, of which 30 were foul.
1901, in 12 counties, 77 apiaries, of which 29 were foul.
1902, in 12 counties, 91 apiaries, of which 30 were foul.
1903, in 14 counties, 96 apiaries, of which 28 were foul.

Then he asks: "How long at this rate will it take to clean Ontario?"

Mr. Holtermann stated that the report sent out by the inspector was entirely incorrect. He mentioned a number of places all round where the disease was raging, and many apiarists had been robbed out. Something must be done, and the law required amendment. Bee-keepers were afraid to criticise McEvoy for fear of the harm he could do them. He said no better man could be found for McEvoy's position if he would act in an impartial, fair, and thorough manner. The result of the discussion is that after thirteen years' work the inspector and assistant inspector have failed to drive foul-brood out of the Province, and it was decided to appoint a committee to revise the "Foul-Brood Act," which had not proved satisfactory.

TRADE CATALOGUE RECEIVED.

J. T. BURGESS AND SON, 10 and 11, Guinea Street, Exeter.—This is a neatly got-up catalogue of 48 pages, in which will be found everything that any bee-keeper may require. The illustrations are mostly from photographs of the actual articles and consequently give a better idea of the hives than ordinary wood-cuts do. The catalogue is "up-to-date" in every respect and should be consulted by those interested. Messrs. Burgess and Sons also send a specimen of a woven wire cone, shown full size in illustration. This is made of woven wire and offers freer ventilation and better foothold to bees than the brass cones generally used. It can be obtained of all dealers.

Woven Wire Cone Bee-escape.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

July 14 and 15, at Grimsby.—Show of Honey, Hives, and Bee Appliances in connection with the Lincolnshire Agricultural Society. Bee Department under the management of the Lincs. B.K.A.

July 20, at Ashby-de-la-Zouch, Leicestershire.—Show of Bees, Honey, and Appliances, in connection with the Horticultural Society's Annual Show. Three open classes, two local and one Leicestershire B.K.A. Bee Demonstrations, Lectures, Flower Show, &c., &c. Schedules from J. H. Dunmore, 30, New Burton-road, Ashby-de-la-Zouch. **Entries close Saturday, July 16.**

July 27, at Henbury, near Bristol.—Annual Show of the Henbury District Bee-keepers' Association in connection with the Horticultural Society's Exhibition. Several open classes with good prizes (two classes with free entry). Schedules from the Hon. Sec., J. Atkin Waller, Pen Park, Westbury-on-Trym, near Bristol. **Entries close July 23.**

July 27, at Paignton.—Annual Show of Honey, Wax, and Appliances of the Devon Bee-keepers' Association, in conjunction with the Exhibition of the Paignton and District Gardeners' Association. Thirteen open classes. Schedules from the Hon. Sec., C. E. Scholefield, Heathfield, Chud[illegible]. **Entries close July 22.**

July 27 and 28, at Cardiff.—Glamorgan B.K.A. Show of Honey, Wax, and Appliances in connection with the Cardiff and County Horticultural Society. Prizes (open to non-members) for Comb and Extracted Honey, Appliances, Frame Hive, Wax, Observatory Hive, and Comb in Fancy Design. Medals and money prizes. Schedules from Wm. Richards, Gabalfa, Cardiff. **Entries close July 21.**

July 29, 30, and August 1 and 2, at Southport.—Annual Show of the Royal Lancashire Agricultural Society. Liberal money prizes are offered for honey along with silver and bronze medals of the B.K.A. and also of the Society. Open classes for Honey-Trophy, Sections, Extracted Honey, Beeswax, Honey-Confectionery, Bee Flowers, Instructive Exhibits in Bee-Culture, &c. Schedules from Edward Bohane, Secretary, Miller-arcade, Preston. **Entries closed.**

August 1 (Bank Holiday), Windsor District, Berks B.K.A.—Annual Show of Honey and Bee-Appliances in conjunction with the Clewer Horticultural Society, in the grounds of Clewer Manor (by permission of E. B. Foster, Esq., J.P., C.C.). Open classes for Observatory Hive, Twelve 1-lb. Sections, and Twelve 1-lb. Jars Extracted Honey. Also classes for Berks only, and for Windsor District only. Schedules from W. S. Darby, Hon. Sec., Consort Villas, Clewer. **Entries close July 23.**

August 1 (Bank Holiday), at Cambridge.—Honey Show of the Cambs. and Isle of Ely B.K.A. Eleven classes with good prizes, including one for "Display of Honey," prizes 30s., 20s. and 10s. Also open gift classes for single section and single 1-lb. jar extracted honey. Schedules from G. E. Rogers, Hon. Sec., "Beeholm," Newnham, Cambridge. The Association will hold shows at **Trinity College Gardens, Cambs.**, on **July 12**, and at **March** on **July 26**, in connection with the Agricultural Society. Full particulars from the Hon. Sec. as above.

August 1 (Bank Holiday), at Andover.—Show of the Andover and District B.K.A. in connection with that of the Horticultural Society. Classes for twelve 1-lb. sections, twelve 1-lb. jars extracted honey, and honey-comb design. Three open classes, first prizes, £1 in each. Schedules from Rev. E. R. Iremonger, Hon. Sec., Clatford Vicarage, near Andover. **Entries close July 20.**

August 3 to 5, at Huddersfield.—Show of Honey, &c., in connection with the Royal Yorkshire Agricultural Society. Schedules and form of entry from Hon. Sec., John Maughan, Blake-street, York.

August 4, at Kingsthorpe, Northants.—Honey Show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar of honey. (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Hon. Sec., Kingsthorpe, Northampton. **Entries close August 1.**

August 4, at Madresfield—Worcestershire B.K.A. Annual Show of Honey and Appliances in connection with the Madresfield Agricultural Show. Open classes for (1) Best Stock of Bees in Observatory Hive, three frames open both sides; (2) For the best and most complete Hive, ready to receive swarm of bees; (7) For the best 6-lb. Jars of Extracted Honey, produced in 1904. Schedules from George Cook, Eastonford House, Powick, Worcester. **Entries close July 30.**

August 10, at Wye.—Kent Honey Show.—Several classes for Extracted and Comb Honey, Trophy, Wax, Mead, Cakes, &c., &c. Liberal cash prizes and silver medals. Open Classes for Single 1-lb Jar Extracted Honey (Light); Ditto (Dark); Single 1-lb. Section, with prizes of 20s., 10s., and 5s. in each class. Bee Demonstrations, Horticultural Show, Cycle Sports, &c. **Entries close August 5.** Schedules from J. Tippen, Secretary, Wye, Ashford, Kent.

August 13, at Lancaster.—Show of Honey, &c., in connection with the Lancaster Agricultural Society's Annual Show. Open classes for six sections, also six 1-lb. jars; and beeswax. Local class for three shallow frames. Lancs. B.K.A. silver and bronze medals and other specials. Schedules from Thos. Armitstead & Son, Lancaster. **Entries close August 4.**

August 17, at Radstock, Bath.—Honey Show in connection with the Radstock and District Horticultural Association. Open classes, three prizes in each, for six 1-lb. sections; six 1-lb jars extracted honey, and two shallow-frames for extracting. Members class for single 1-lb. jar extracted honey. Schedules from B. M. Clark, Sec., Fox Hill, Radstock. **Entries close August 10.**

August 17 and 18, in The Quarry, Shrewsbury.—Annual Show in connection with the Shrewsbury Great Floral Fête. Eight open classes for Honey. Entry free for 1-lb. Jar and 1-lb. Section. Schedules from S. Cartwright, Hon Sec., Shawbury, Shrewsbury. **Entries close August 5.**

August 24, at Fleetwood.—Honey Show in connection with Fleetwood Floral and Horticultural Society. Open classes for Six 1-lb. Sections. Six 1-lb. Jars Light Extracted Honey, and Six 1-lb. Jars Dark Extracted Honey. Schedules from Edward Cook, Hon. Sec., Rossall Grange Farm, Fleetwood. **Entries close August 14.**

August 24, at Sandbach.—Honey Department of the Cheshire Agricultural Society's Show, under the management of the Cheshire B.K.A. Open classes for Hives, Sections, and Extracted Honey. Substantial prizes. Bee Lectures and Demonstrations on the showground. Schedules from T. A. Beckett, St. Werburgh's Chambers, Chester. **Entries close August 3 (at double fees August 10).**

August 24, at Bradford Abbas, Dorset.—Annual Show of the Yetminster and District B.K.A. in the old Vicarage ground. Three open classes, including three 1-lb jars extracted honey and three 1-lb sections. Schedules (with entry form) from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne, Dorset. **Entries close August 20**

August 24 and 25, at Leamington.—Annual Show of the Warwickshire B.K.A. in connection with that of the Warwickshire Agricultural Society. Schedules from James Noble Bower, Hon. Sec., Warwickshire B.K.A., Knowle.

August 25, at Llangollen.—In connection with the Sixth Annual Flower Show. Open classes for Six 1-lb. Sections, Six Jars Extracted Honey, and Beeswax. Schedules from Frank Little, **Brook Bank**, Llangollen. **Entries close August 11.**

August 27.—Twelfth Annual Show of the South of Scotland Bee-keepers' Association. Five open classes for extracted and comb-honey and wax. Schedule and entry form from Hon. Sec., S. M'Vie, Essex Park Cottage, Dumfries. **Entries close August 20.**

August 30, at Cartmel, Lancashire.—Honey show in connection with the 32nd Annual Show of the Cartmel Agricultural Society. Three open classes for Comb and Extracted Honey (prizes, 15s., 10s., 5s., and 2s. 6d.), and Beeswax (prizes, 10s. and 5s.), along with silver and bronze medals of the Lancs B.K.A. Schedules from W. Cragg, Secretary, Cartmel, viâ Carnforth. **Entries close August 18.**

September 15, 16, and 17, at Crystal Palace.—Surrey Bee-keepers' Association Annual Exhibition of Bees, Honey, Wax and Appliances, &c. Twenty-five classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, Secretary, Marden House, Redhill, Surrey. **Entries close September 1.**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisement. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

F. H. H. (Wroxall). — All the bees reached us dead. The mortality may be caused by paralysis, starvation, or suffocation. Paralysis appears sometimes when fine warm days are succeeded by cold and damp, and with the advent of warm weather the colonies recover.

R. B. D. (Kendal).—Young queen balled and killed by workers. Probably returned to wrong hive after mating.

Curious (Normandy).—The nest of wild bee belonging to the genus *Osmia*, or Mason bees. The yellow masses are pollen for feeding the grubs.

C. S. (Harrogate).—It is not at all unusual for a worker to get into a queen-cell and become imprisoned therein, as the one you send has been.

R. S. W. (Brampton).—Cool it slowly by diminishing the heat gradually.

T. E. L. (Rumbling Bridge).—There is only pollen in the new comb.

Nutfield (Hants).—Queenless Stock.—The stock, being queenless and broodless, is no use whatever, as no possible good can be got from it.

Suspected Combs.

P. C. (Beverley).—You have done quite right, as the comb sent contains foul-brood.

Glenlivet (Tombae).—The comb is infected with foul-brood, and you have done quite right to destroy the remainder.

G. T. W. (Gosport).—Chilled brood.

C. D. W. (Kettering).—Foul-brood.

X. Y. Z (Streatham).—The black larvæ have died from being chilled.

W. E. R. (Driffield).—Comb contains foul-brood.

*** *We have several communications on the subject of Foul-brood legislation in type, which will appear next week.*

Editorial, Notices, &c.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of June, 1904, was £3,937.—From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[5576.] The passing of the month of June and midsummer marks another period of the bee-year, the swarming season being practically over in the South, and in most parts the chief sources of honey has also been laid low by the mowing-machine. After June we have to depend on the white clover on our wayside wastes, along with such other sources as the early sheep-fed fields of grass or the available parks where the grass is allowed to stand till after the field or hay-crops are gathered in. Then we have the aftermath, which, in addition to vetches, limes, and brambles, constitute the closing sources of the honey-crop so far as super-honey is concerned in this district of Wessex.

Wax-moths.—Now is the time to put into practice the suggestion of "Nemo," Trieste, (5556, page 246), re moth-traps, and I trust our friends located in districts infested with these pests will endeavour to trap every moth on the wing these sultry nights. For myself, I am always on the alert when I have to open hives, and rarely does a moth or cocoon escape my notice; but it is very annoying to allow one to take flight, and see it coolly walk into the entrance of a hive teeming with bees. I usually manage to crush them on the alighting-board, although occasionally one will elude the thumb or finger-point of the bee-keeper, however active.

Drones in Hives.—These will be found more numerous in some hives than others, probably from the bee-keeper using "starters" of foundation instead of full sheets. When hiving swarm, if full sheets of worker-cell foundation are used, there will be but few drones produced—in fact, I have many times advised a half-sheet in one of the frames so that we may have some full-grown drones to perpetuate the strain of bees.

Foul-brood Legislation.—I would like to ask if the committees of the various county Associations have a free hand in deciding that their Association should or should not support the obtaining of compulsory powers? Ought not a plebiscite of the members be taken in order to decide the matter? I am led to ask this because at the particular meeting of committee there may be only a small attendance, in which case should those two or three have the power of deciding for the Association? I trow not! In my last notes on foul-brood I wrote with full knowledge of the information given by "Nemo" on page 268 of B.B.J. for July 7. In past volumes of B.B.J. I have commended Mr. McEvoy's system of dealing with the disease; but if Messrs. Holterman, Morrison, and Kidd are correct in their statements, "compulsory powers" and an energetic inspector, after thirteen years' practical work, are foiled in stamping out the unseen foe of the bee-keeper, one begins to ask if the Foul-brood Law was worth the paper it was printed on? Mr. George Saunders proposed to go further than Mr. McEvoy by disinfecting the hives; but ought not the bees to be disinfected also?

Solar Wax Extractors. — The past few days, with the thermometer standing at 82 deg., 84 deg., and 85 deg. in the shade, with brilliant sunshine for the whole day, has enabled me to give this appliance (one of Mr. Howard's double-glass fronted extractors) a fair trial. On the 9th I extracted about $\frac{3}{4}$ lb. of good commercial wax from the combs of an old straw skep, in about three hours, and the refuse left in the extractor after "Old Sol" had poured out his rays on it did not appear to contain a particle of wax! I consider it a very efficient appliance.

The Honey Crop.—What of the season's crop and consequent prices of our commodity? I hear this question from customers who, when sending for lace-paper, etc., often enclose a few words on their bee-work and results. Well, up to the date of writing I have not heard of any "big takes," and, therefore, conclude that the output is only moderate in quantity. It is not what two or three fortunate ones have taken per hive that we want; we should have results from the larger apiaries, where bee-farms are run on commercial lines and honey is produced in large quantities. I have not made any alteration in price from last year myself.

P.S.—Will the party who holds first prize card, R.A.S.E., Class 416, No. 2,963, kindly return same to W. WOODLEY, Beedon, Newbury.

THE FOUL BROOD ENIGMA.

[5577.] A local bee-keeper informs me that for ten years a stock of bees was kept in one hive without even so much as having the brood-nest ever looked into; in fact, it was impossible to examine the latter owing to the combs being built across the frames, yet this hive (which was never once cleaned out) swarmed about every alternate year. Not only so, but for two years there was located on one side of it a stock affected with foul brood, yet the hive first named never caught the disease so far as outward observance could determine, as the stock was always vigorous. Now here was a case in which we might reasonably expect contagion, yet the stock escapes.

It therefore seems to me that the great principle which governs the power to resist disease must lie in the vigorous constitution of the stock, and that in consequence there may be such a thing as natural immunity. As I have before pointed out, we find that this natural immunity from certain contagious diseases appertains to human beings, who can be in the midst of them without danger. The whole secret being pure blood, and this depends on a healthy ancestry, along with pure diet, pure air, and pure living. This principle must I think be observed in dealing with bees, and we must not only use the ordinary methods of curing foul brood, but also requeen from healthy stocks, selecting our queens in all cases only from already immune colonies. This is what Nature would do if left alone, as all stocks with a tendency to the disease would die out. Bees probably existed for thousands of years before they were domesticated by man, and the race has continued vigorous for the most part; certainly more vigorous than if man had gone on breeding from all stocks indiscriminately. Too much stress cannot, to my mind, be laid on this matter of raising a race of bees immune from foul brood, and I feel certain it can be done if bee-keepers practise the removal of all queens absolutely from diseased stocks and keep no queen longer than three or four years. In the case of a colony only slightly affected, so radical a measure as immediate removal of queens might be deferred when young ones are not obtainable.

I append a list of what I believe to be the chief precautions necessary for preventing foul brood, and if all bee-keepers observe them and then get the disease they will have nothing to reproach themselves with:—(1) Absolute cleanliness; (2) dry hives; (3) renewal of all brood-combs or their thorough disinfection annually; (4) annual disinfection of all store-combs and appliances; (5) young queens every fourth year; (6) removal of all queens from diseased stocks; (7) complete avoidance of chilled brood; (8) the occasional importation of queens from other districts from known healthy stocks to avoid in-breeding. I practice all these methods myself and have hitherto escaped the disease. Whether or not this immunity will continue time will show. To my mind prevention is better than cure, and I see no necessity for legislation, as all bee-keepers can practise these rules for themselves, and those who do not will take the consequences. No doubt when once foul brood gets into a district it is a danger to all, but the question is—would the loss of our freedom to do as we please with our bees be compensated for adequately.

I neither want my bees managed by a Government official, nor be compelled to practise any treatment that he prescribes. I prefer to follow my own plan myself, and strongly object to arbitrary interference of any kind. I am obliged to our editors for permitting me to make my protest, though they probably do not agree with all I have said. But right ideas are arrived at by free discussion, and I strongly appeal to all bee-keepers to weigh this matter well and not to rush after an Act of Parliament in a panic! As Mr. Woodley points out, let us begin by inquiring into the working of similar Acts abroad.

In conclusion, I may be allowed to say my greatest objection to legislation would be overcome if there were a clause in the Bill to the effect, "That in all cases where an apiary is clear of foul brood on May 1 in each year, such apiary shall not again be interfered with by the inspector before September 1 following." If this clause be inserted I should not object to a foul brood Bill.—W. J. Farmer, Truro, July 5.

[With regard to the suggestion that "apiaries clear of foul brood on May 1 in each year shall not be interfered with till September," our correspondent overlooks the fact that May is the month in which stocks infected by "robbing" in autumn and early spring develope the disease more than at any other time.—Eds.]

FOUL BROOD LEGISLATION.

[5578.] Referring to the letter of Colonel Walker in B.B.J. of June 30 (5560, p. 254), we read that the Devon B.K.A. had "unanimously decided to recommend the Foul Brood Bill to the Devon County Council, etc.," I think this statement somewhat misleading. No doubt the Council of the Devon B.K.A. agreed in the matter, but before deciding on anything of so much importance to the entire bee-keeping community would it not be well that all the members should be asked to express their individual opinion in the matter?

This could be done by enclosing in the monthly RECORD a circular to each member setting out clearly the meaning of the Bill and asking whether or not they would be in favour of the same? For my part, I am certain that if this Bill is passed it will entirely do away with a great many bee-keepers, and this will mean a loss of membership to the Association. I know of several bee-keepers who, rather than submit to a compulsory examination of their stocks by a Government official, would give up the craft altogether. In view of this, among other disadvantages, I think we should weigh the matter carefully to see if the bee industry is likely to benefit by the Bill, and not rush into the thing headlong! I am sure there are quite enough inspectors to pay already without adding more. I have been a bee-keeper for over thirty years; my apiary now consisting of about fifty stocks, and I can always keep the disease at bay, and do not want the aid of a Government official. It would be well to hear the opinion of other bee-keepers on this most important subject. I send name for reference and sign myself—A DEVON BEE-KEEPER.

P.S.—A simple way to clean hives is to take some petroleum and with a painter's brush paint the whole inside of hive, then put in a few shavings or some paper and set it alight! Any part that is not sufficiently scorched may have a little more oil sprinkled with the brush when burning. By this simple plan it can be done thoroughly and quickly without using a painter's "blow-lamp." It is well to have the hive-cover by you, so that if it burns too fast you can put on the cover and so extinguish the fire.

[5579.] In reference to the footnote to my letter, under the above heading, on page 262 of last week's issue, surely no offence can be taken where none was intended? I only stated what I knew to be a fact as regards Cumberland, and solely as a reply to Mr. W. J. Farmer's suggestion, and had no idea that you would take it in the way you have. But I must take exception to your inference against Cumberland bee-keepers, as I happen to know that they compare more than favourably with many in the South of England. The skep with us is becoming a thing of the past, and we had great difficulty in obtaining them for our recent B.B.K.A. examinations, and members asked: "Whatever did we want them for?" — GEORGE M. SAUNDERS, Hon. Sec. and Treasurer, Cumberland B.K.A., Keswick, July 9.

[Our correspondent has an unfortunate habit of reading into remarks we happen to make something we neither said or intended to convey. The inference with regard to bee-keepers who never read the BEE JOURNAL was his, not ours, as applied to those located in Cumberland. For the rest, we are content to let our footnote stand and be judged thereby. On the other hand, if Mr. Saunders' object was not to "belittle the influence of our paper," what was it?—EDS.]

[5580.] I entirely agree with what is said by Mr. W. J. Farmer and Mr. W. Woodley on this subject in the B.B.J. of June 30 (pp. 253 and 254). Compulsion is an ugly thing, as many would find, and some who are at present fighting with foul brood and that successfully, although they may not be able to keep free from all taint, might resent interference. It would also mean dislocation of the trade in bees and destruction of apiaries, and along with this there is the question of compensation, bringing an increased burden upon the taxpayer. Disinfectants and preventives have been found which have yielded a great measure of success in eradicating this disease, and in my opinion it seems obvious that further researches should be made in this direction in order to discover the cause of it and methods of prevention. Name enclosed for reference.—A BEE-KEEPER, Cambs, July 5.

BEE NOTES FROM MID-KENT.

[5581.] The weather in Mid-Kent during June has been of a patchy description. In the early days of the month a strong and bitter nor'-easter blew for nearly a fortnight. The keen wind scorched and shrivelled the young leaves as if with the blast of a furnace. I thought of our friend, Mr. Sladen, on the exposed East Coast, and wondered if his bees were suffering like mine.

At the south side of my garden is a stone wall, and it was pitiful to see the poor bees trying to fight their way home against the breeze. I saw many flying low along the ground till they came to the wall, and then rise to surmount the obstacle, but strong gusts would catch and hurl them back to leeward to make a fresh attempt. Six or seven times they would rise in the vain attempt to cross over, and at last fall exhausted in the long grass. Then came some very hot weather, but owing to the scarcity of bee-forage not much progress was made in honey-gathering.

One evening, as the tired bees were returning homeward, I observed a shapeless-looking mass on the alighting-board of one hive, and, going closer, found an enormous toad making a hearty supper off my bees. Stings did not trouble him at

all, for he snapped up any bees that alighted near him, and bolted them whole. I seized him by the hind leg and carried him ignominiously to the furthest extremity of the garden. I also saw a spider making a meal of a few bees near my observatory hive. If the bee caught in the web was a lively customer, and kicked and struggled to escape, Mrs. Spider—for her size proclaimed her to be of the feminine gender—would cut a few threads and get rid of the buzzing prisoner; but if the bee kept pretty still she would cautiously approach, thrust out a long claw, and tickle her prisoner in the ribs!

If this was borne quietly she would make a sudden rush, seize the bee by its head, and haul it to her den.

May I repeat my request to any of your readers living near Charing to come and see my home-made extractor at work? On June 2 I tried it on some honey, partially granulated in the comb, and, though I cannot say it came out clean, yet I got 10 lb. of honey from five shallow frames. Would any extractor clean out granulated honey? I am this year trying Colonel Walker's plan of dealing with swarms, but am not over-successful. I will report on it later.—S. Darlington, Charing, Kent. July 4.

QUEENS DISAPPEARING.

CURIOUS BEE INCIDENTS.

[5582.] Two curious incidents have happened in my apiary this season. After a swarm had issued from one hive, eight or ten queen-cells were cut out, and two young queens were left on the combs. A week later I had reason to fear both of these queens had come to grief, and an examination of the stock then, and a fortnight later, showed that this was the case. As several dull days followed the excision of the cells, it is possible the virgin queens would not fly for mating. Do you think the bees would then get rid of them, or is a more likely explanation that they both perished in a duel? The second incident was that worker-brood was found in one set of shallow-frames, though they stood on queen-excluder zinc. When, however, a second examination of the frames was made, no eggs or larvæ were to be found. Would you account for these facts by the queen having been small enough to get through the excluder and go down again, or is it more likely that workers carried eggs from below into the shallow-frames?—W. H. Harris, Hayes End, Middlesex.

[The latter seems most likely.—Eds.]

THE LATE "ROYAL" SHOW.

[5583.] I had been looking forward for some time past to visiting the "Royal" Show, and on Saturday (the last day of the show) I managed to get there, but not until four o'clock, and on my arrival made for the honey tent, when, to my dismay, I found most of the honey exhibits had been removed and packed up, not more than half-a-dozen exhibits being left on view. It was very disappointing to see the empty stands, and I feel sure there must be many others, who, like myself, were unable to get to Park Royal until late, and then only to find the honey had been cleared away. If I remember rightly, the exhibits at last year's show were on view until the show closed, which gave everyone a chance of inspecting them. On Saturday the gate was larger than any other day during the week, and I cannot but think that had the exhibits been left until later in the even-in they would have attracted an interested public, which I feel sure would have been beneficial in helping to stimulate the bee-keeping cause, for which you, Sir, and, I trust, all of us work.—Basil E. Buckwell, Acton, W., July 8.

ANTS IN HIVES.

A SIMPLE REMEDY.

[5584.] During the late spring these interesting insects seem to have been present in unusual numbers in the hives. Probably attracted by the warmth supplied by the bees below, the ants have tried to establish colonies in the coverings of the brood-chamber. If a few balls of naphthaline be placed on and among the quilts, the ants and other disagreeable intruders will shortly be found to have removed to more hospitable quarters.—W. H. A. W.

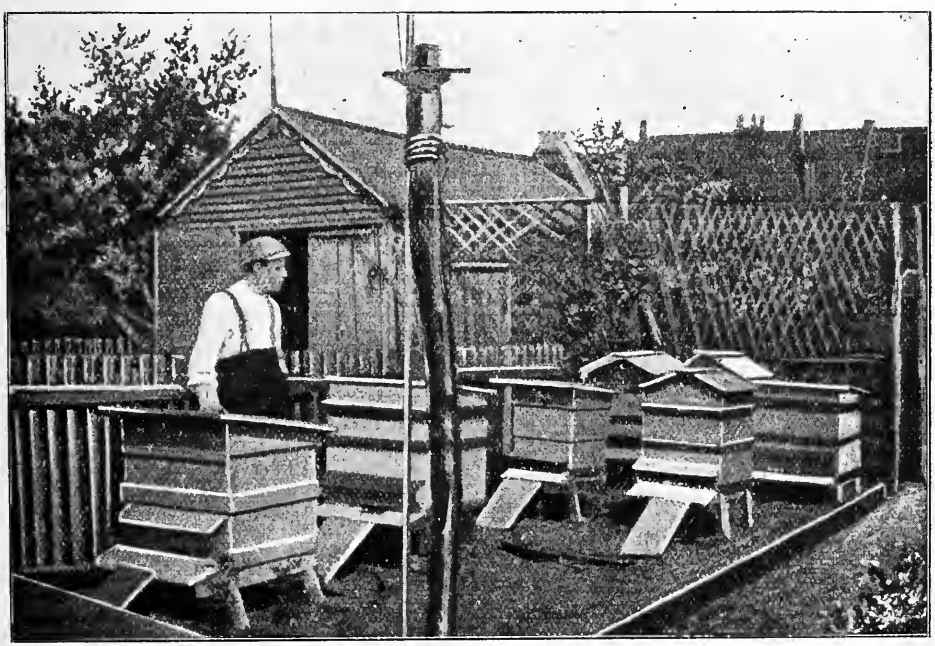
HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

Mr. Wakerell—whose apiary on next page forms our bee-garden picture this week—began bee-keeping so recently as 1902, and must therefore be classed as a beginner; yet he cannot claim to have taken to heart the maxim we so persistently impress upon novices about the wisdom of "making haste slowly" in all that pertains to bees and bee-work. Though only in his third year with bees, we learn that he has tried his hand at nearly all departments of the craft, ranging from hiving swarms to queen-raising, and winding up in a battle with foul brood. When, after all this rapidly-gained experience, we can add that our young friend possesses the very desirable gift, natural or acquired, of being able to sell all the honey his bees can gather and has to buy more to fill orders, it becomes evident that, in American bee-parlance, he knows how to "hustle around" to some tune. We may, therefore, well forgive him

for going ahead, if it be somewhat unorthodox, and congratulate him on his success in all branches of the craft, for if he can do fairly well in poor seasons, we need not fear for results in good ones. For the rest, his "notes" speak for themselves; he says:—

"In answer to your request for a few 'notes' of my bee-experiences to go along with photo of my apiary, I would first say I am but a novice in the craft, and keep my bees more for pleasure than profit. I caught the 'bee-fever' from a Yorkshire friend, and the complaint being contagious, soon became an epidemic in our family, for my father and two brothers soon became as enthusiastic on the subject



MR. A. WAKERELL'S APIARY, CROYDON, SURREY.

of bee-keeping as myself. We were, however, very unfortunate in starting with such an adverse season before us as that of 1902; not only so, but we have practically had nothing but bad bee-weather ever since. But notwithstanding all this, I have managed to turn my hand more or less to nearly every branch of the craft, including uniting, hiving swarms, queen raising and introducing, and, worst of all, had to do a bit of battling with foul brood. With regard to the latter, let me say I purchased a stock of bees from a man who was leaving England, and ere long we found that it was decidedly affected with foul brood. A council of war was, therefore, summoned, and eventually it was decided to burn the lot, which we promptly did, and even now I am so convinced that we did the best thing under the circumstances that I intend to serve others the same if I discover the disease in any of my hives. I made a fresh start with one hive, and have increased with swarms, of which I had three the following year, and, curiously enough, they all settled on the same tree and branch, a few feet from the ground, so that I have not had any difficulties in 'swarm-catching' so far. With regard to honey, I have had no large 'takes' yet owing to the inclement weather which has prevailed nearly ever since I first started, but we are hoping to secure our 100 lb. from best stock next year, as I believe this to be a fine honey district, surrounded, as we are, by lime trees and clover. We are also in touch with the 'lavender fields' and have heather not far off. Inexperience compels me to say I cannot offer anything of much use or interest to the craft, except that I find the best way of securing a market in disposing of my honey is by means of a small glass case fixed up in the front of my house, and in this case are displayed one pound and half-pound jars of extracted honey and comb-honey in sections, along with small cakes of beeswax. I have also a queen-bee mounted on a card. In this way the whole thing is a novelty to which people are unaccustomed, and attracts considerable attention from passers-by. It enables me to sell any amount of honey; in fact, I had to buy

more in order to supply all my customers, who readily pay 1s. per lb. for it. I may offer another little 'tip' to bee-keepers who, like myself, are married men, and which I have found to answer admirably, viz., giving my wife a little commission on each pound of honey disposed of. In this way I sell a great deal more honey than I otherwise should be able to do.

"I have gathered about me quite a small library of books on the subject of bees and bee-keeping, including Mr. Cowan's 'Guide Book,' which we term the bee-keepers' Bible, and when we are in a difficulty we refer to it and can always find the help we want. In closing these brief 'notes,' let me say that I love every bee in my apiary, and would not be without them now for anything. We take in the B.B.J., and, if the present good weather continues, I can only say of our family of bee-keepers all our stocks are now taking full advantage of it."

WEATHER REPORT.

WESTBOURNE, SUSSEX,
June, 1904.

Rainfall, 1·19 in.
Heaviest fall, ·30 on 24th.
Rain fell on 10 days.
Below average, ·90 in.
Sunshine, 287·1 hours.
Brightest day, 30th, 15·1 hours.
Sunless days, 1.
Above average, 57·6 hours.
Maximum temperature, 72° on 30th.
Minimum temperature, 40° on 8th.
Minimum on grass, 33° on 9th.
Frosty nights, 0.
Mean maximum, 67·5.
Mean minimum, 47·4.
Mean temperature, 57·4.
Above average, 0·5.
Maximum barometer, 30·50 on 22nd.
Minimum barometer, 29·80 on 25th.

L. B. BIRKETT.

Queries and Replies.

[3481.] *B.B.K.A. Experts' Certificates.*—Having passed the B.B.K.A.'s third-class examination last year, I now wish to qualify for the more advanced certificates, and am therefore wondering whether you could kindly recommend me a capable instructor who would also give me the opportunity of practical work in the apiary? A few lines of reply would much oblige.—E. W., London.

REPLY.—There is no need whatever for having practical instruction in the work of an apiary when preparing for the advanced (i.e., first and second) certificates of the B.B.K.A. All practical bee-work is covered by the third-class certificate, the higher branches consisting almost entirely of paper-work. The real difference between second and third class consists of a more careful study of the text-books recommended for perusal, and may be regarded as the scientific side of the subject, along with the more thorough knowledge of practical work which comes of longer experience. Particular atention is also required in studying the nature of bee diseases, especially that known as foul-brood. The first-class examination entails full knowledge of the anatomy and physiology of the honey-bee, together with facility of expression and some natural ability as a lecturer. You should apply to the Secretary of the B.B.K.A., 12, Hanover Square, London, for a syllabus of the first and second class examinations, which explains these matters.

[3482.] *Taking Queens to Africa.* — I would be greatly obliged if you would be kind enough to let me know the best method of packing bees and queens to be sent to S. Africa. A friend is taking some queens. The smallness of the package will be a great consideration. — W. B. GREEN, County of Southampton, June 28.

REPLY. — The best plan is in small nuclei, containing two frames of comb honey. The nuclei are generally about just large enough to hold frames about 4 in. long and 3 in deep. These are fitted with combs containing honey. Young bees are shaken in off some of the combs from the hive supplying the queen, which is then introduced, and fine perforated zinc is put on the top. Another way is by using a travelling cage such as is shown on page 131 of "Guide Book," the circular part being filled with soft candy, the queen and a few workers being confined in the long chamber.

[3483.] *Distance Bees Travel to Forage.*—Would you kindly tell me in the B.B.J. how far bees will go when gathering honey? We have lots of clover round here in a radius of about two miles (bee-line miles). 1. Is this too far for them? 2. Do you think it possible there is no honey in the white clover this year, and if so, what would be the probable cause? I send name, etc., and sign—BUSY BEE, Cuckfield, July 7.

REPLY.—1. Though some bee-keepers hold that bees go as far as three or four miles from their hives when foraging, we think it is only under very exceptional circumstances, and this view is generally accepted by those with large practical experience. Personally, we have known bees gathering surplus-honey freely while those in an apiary three miles away were "living from hand to mouth." A radius of two miles from the hives may be taken as about the area in which bees work. 2. In the present splendid bee-weather white

clover should be yielding honey abundantly; the bloom of this queen of honey-plants is, however, not so plentiful this year as we should like to see it.

[3484.] *Suspected Foul Brood.*—On examining one of my hives to-day I found three cells in a sunken condition. The caps were not broken. I cut them out and they are full of black watery stuff. Will this be foul brood? The larvæ in all cells not sealed over were in normal condition and white. The suspicious-looking cells were in centre of brood-nest. I may say that all my hives are in a flourishing condition, very strong and working well. An answer in B.B.J., of which I am a constant reader, will oblige—JOHN NEWBIGIN, Humshaugh-on-Tyne, July 7.

REPLY.—From description given, it would appear that the brood in question was chilled only, not foul; but we cannot give a definite opinion without having a small sample of the dead brood sent for inspection.

[3485.] *Removing Swarm from Hollow Tree.*—A tree about two feet in diameter is lying on the ground near by, having been cut down about twelve months ago, and the hollow part of this tree has been occupied by bees for two or three years past. I will, therefore, be glad if you will tell me how I can get the swarm into a "W.B.C." frame-hive, and when would be the best time of year and day to operate? I send rough sketch of the tree as it now lies on the ground with the hole by which the bees enter and place where I think the combs are located.—W. S. P., Meifod, Welshpool, July 8.

REPLY.—Judging by your sketch, it should not be very difficult to remove the bees by sawing off the bottom portion of tree near the spot where combs are located. The upper part should also be cut away just above the "small hole by which some bees come out," as stated. This done, the part of tree containing the bees could be set on end and a straw skep fixed above the exposed combs—as in "driving" operations—and by sending in a few puffs of smoke below and jarring the tree with a a stout stick the bees may be driven up into the skep for removal. Seeing, however, how much labour this would involve in order to secure a driven lot of bees, which can usually be had in autumn for a few shillings, we should consider the advisability of carrying away the tree as it stands, after cutting off top and bottom portions and setting it up as a rustic beehive in your own garden, such as was illustrated in a former issue of B.B.J. and much admired by readers. We do not advise removal of the old combs from tree for tying into frames of a new hive; far better to have new combs built from sheets of foundation. Early autumn is the best season to operate.

[3486.] *Cutting Out Queen-Cells After Swarming.*—I will be much obliged for answers to the following questions. 1. Is enclosed piece of comb infected with foul brood, and if so, what am I to do to effect a cure? I may say the bees were fed with medicated syrup all through the spring. 2. The hive from which the piece of comb was taken swarmed on June 15. I cut out all queen-cells but one, and on looking into the hive on July 1 I found that all brood left by old queen had hatched out. I also found that the hive was very strong in bees, but the queen-cell was still sealed. I therefore cut it out, and on opening found it empty. What was the probable cause of this? I have now given the stock a young queen. 3. Is it a mistake to examine frames after supers have been put on? 4. If bees persist in raising queen-cells (though the first lot have been cut out, and more room given in the shape of frames and super) is it right to remove these also, or are the bees bound to swarm? If so, it would seem that removal would only delay the raising of a young queen. I send name and sign—GRIP, Aberdeenshire, July 9.

REPLY.—1. Yes, there is foul brood of old standing in comb, but none of recent date. 2. It was a mistake to trust to a single cell hatching out right, unless you had experience in selecting a "ripe cell," *i.e.*, one certain to contain a queen in course of development. 3. Not exactly a mistake, because it is sometimes necessary to do so; but it should not be done without real need. 4. Bees will not persist in raising queen-cells if there are no eggs or very young larvæ in the combs.

[3487.] *Removing Frames of Honey.*—I shall be greatly obliged for direction in reply to the following questions:—1. I next week shall be leaving my two hives for a month, and want to know whether I should withdraw the frames (now nearly filled with honey but not capped)? 2. If I extract the honey ought I to replace the frames, or introduce new frames with foundation? 3. If I only withdraw some frames and substitute for them new frames with foundation, where should these be put—in the middle or at the sides? I send name and sign myself—"NOVICE," Hampstead, London, July 11.

REPLY.—1. If the frames referred to are those in the brood-chamber and not in supers above the latter, we do not advise removal at all; but if your reference is to surplus honey stored above the brood-nest, it may be well to take it off before

leaving, or it would probably be carried down in a month. 2. Replace frames if you extract. It is too late in the season to give foundation for building out. 3. Above answer applies to this query.

[3488.] *Iron Taps for Honey-Ripeners.*—I have had a tin honey-ripener fitted with a new tap, and the local tinsmith has put in an iron one, untinned. Would you kindly let me know whether you consider that honey, while standing in this ripener for a few days to clear, would be injured by coming in contact with the iron? I send name, etc., and sign—AN EXHIBITOR, Salop, July 9.

REPLY.—If the honey had remained in contact with the iron for a short time only we should see no objection, but "a few days" is a different matter, and it would certainly injure the honey more or less. We should have the tap removed and "tinned" before using as stated, seeing that oxidisation would be set up in the time mentioned, and the honey be damaged thereby. All taps and honey-valves should be tinned (not galvanised).

[3489.] *Extracting Wax from Cappings.*—I have a lot of comb-cappings. Is there any way I can melt these down and free them of the small quantity of honey they have without a wax extractor? Any information will much oblige.—R. B. DART, Bucks, July 11.

REPLY.—With a temperature of over 80 deg. Fahr. in the shade, as at present, it should be a simple matter to extemporise a solar-extractor (i.e., a lid-less box covered with a sheet of glass), when, by putting the "cappings" on a sheet of perforated zinc the wax would run into a dish placed to receive it. Another simple plan is to put the cappings in a canvas bag and immerse in a copper (weighting bag down). Then fill with water, and heat till wax rises to surface. When allowed to cool, the wax can be removed in a solid cake. Honey can be removed by washing the cappings.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

July 14 and 15, at Grimsby.—Show of Honey, Hives, and Bee Appliances in connection with the Lincolnshire Agricultural Society. Bee Department under the management of the Lincs. B.K.A.

July 20, at Ashby-de-la-Zouch, Leicestershire.—Show of Bees, Honey, and Appliances, in connection with the Horticultural Society's Annual Show. Three open classes, two local and one Leicestershire B.K.A. Bee Demonstrations, Lectures, Flower Show, &c., &c. Schedules from J. H. Dunmore, 30, New Burton-road, Ashby-de-la-Zouch. **Entries close Saturday, July 16.**

July 27, at Henbury, near Bristol.—Annual Show of the Henbury District Bee-keepers' Association in connection with the Horticultural Society's Exhibition. Several open classes with good prizes (two classes with free entry). Schedules from the Hon. Sec., J. Atkin Waller, Pen Park, Westbury-on-Trym, near Bristol. **Entries close July 22.**

July 27, at Paignton.—Annual Show of Honey, Wax, and Appliances of the Devon Bee-keepers' Association, in conjunction with the Exhibition of the Paignton and District Gardeners' Association. Thirteen open classes. Schedules from the Hon. Sec., C. E. Scholefield, Heathfield, Chudleigh, S. Devon. **Entries close July 22.**

July 27 and 28, at Cardiff.—Glamorgan B.K.A. Show of Honey, Wax, and Appliances in connection with the Cardiff and County Horticultural Society. Prizes (open to non-members) for Comb and Extracted Honey, Appliances, Frame Hive, Wax, Observatory Hive, and Comb in Fancy Design. Medals and money prizes. Schedules from Wm. Richards, Gabalfa, Cardiff. **Entries close July 21.**

July 29, 30, and August 1 and 2, at Southport.—Annual Show of the Royal Lancashire Agricultural Society. Liberal money prizes are offered for honey along with silver and bronze medals of the B.K.A. and also of the Society. Open classes for Honey-Trophy, Sections, Extracted Honey, Beeswax, Honey-Confectionery, Bee Flowers, Instructive Exhibits in Bee-Culture, &c. **Entries closed.**

August 1 (Bank Holiday), Windsor District, Berks B.K.A.—Annual Show of Honey and Bee-Appliances in conjunction with the Clewer Horticultural Society, in the grounds of Clewer Manor (by permission of E. B. Foster, Esq., J.P., C.C.) Open classes for Observatory Hive, Twelve 1-lb. Sections, and Twelve 1-lb Jars Extracted Honey. Also classes for Berks only, and for Windsor District only. Schedules from W. S. Darby, Hon. Sec, Consort Villas, Clewer. **Entries close July 23.**

August 1 (Bank Holiday), at Cambridge.—Honey Show of the Cambs. and Isle of Ely B.K.A. Eleven classes with good prizes, including one for "Display of Honey," prizes 30s., 20s. and 10s. Also open gift classes for single section and single 1-lb. jar extracted honey. Schedules from G. E. Rogers, Hon. Sec., "Beeholm," Newnham, Cambridge. The Association will hold shows at **Trinity College Gardens, Cambs.**, on **July 12**, and at **March** on **July 26**, in connection with the Agricultural Society. Full particulars from the Hon. Sec. as above.

August 1 (Bank Holiday), at Andover.—Show of the Andover and District B.K.A. in connection with that of the Horticultural Society. Classes for twelve 1-lb. sections, twelve 1-lb. jars extracted honey, and honey-comb design. Three open classes, first prizes, £1 in each. Schedules from Rev. E. R. Iremonger, Hon. Sec., Clatford Vicarage, near Andover. **Entries close July 20.**

August 2, 3, and 4, at Dudley.—Annual Show of the Dudley Horticultural Society. "Gift class."—The honey section includes a single 1-lb. jar extracted honey, first prize 20s.; second, 10s.; third, 5s. Schedules from Howard Dickinson, F.R.H.S., Horticultural Society, Dudley. **Entries close July 29.**

August 3 to 5, at Huddersfield.—Show of Honey, &c., in connection with the Royal Yorkshire Agricultural Society. Schedules and form of entry from Hon. Sec, John Maughan, Blake-street, York.

August 4, at Kingsthorpe, Northants.—Honey Show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar of honey. (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Hon. Sec., Kingsthorpe, Northampton. **Entries close August 1.**

August 4, at Madresfield.—Worcestershire B.K.A. Annual Show of Honey and Appliances in connection with the Madresfield Agricultural Show. Open classes for (1) Stock of Bees in Observatory Hive; (2) For complete Frame Hive; (7) For 6-lb. Jars of Extracted Honey. Schedules from George Cook, Bastonford House, Powick, Worcester. **Entries close July 30.**

August 10, at Wye.—Kent Honey Show.—Several classes for Extracted and Comb Honey, Trophy, Wax, Mead, Cakes, &c., &c. Liberal cash prizes and silver medals. Open Classes for Single 1-lb Jar Extracted Honey (Light); Ditto (Dark); Single 1-lb. Section, with

prizes of 20s., 10s., and 5s. in each class. Bee Demonstrations, Horticultural Show, Cycle Sports, &c. Schedules from J. Tippen, Secretary, Wye, Ashford, Kent. **Entries close August 5.**

August 11 at Bath.—Annual Show of the Bristol, Somerset, and South Glos. B.K.A. Seven open classes for honey, &c. Cash prizes to value of £8 11s. Schedules from Mr. J. W. Brewer, 26, Lambridge-place, Bath. **Entries close August 3.**

August 13, at Lancaster.—Show of Honey, &c., in connection with the Lancaster Agricultural Society's Annual Show. Open classes for six 1-lb. sections; six 1-lb. jars extracted honey (light); six 1-lb. jars extracted honey (dark); and beeswax. Local class for three shallow frames. Lancs. B.K.A. silver and bronze medals and other specials. Schedules from Thos. Armitstead & Son, Lancaster. **Entries close August 4.**

August 17, at Radstock, Bath.—Honey Show in connection with the Radstock and District Horticultural Association. Open classes, three prizes in each, for six 1-lb. sections; six 1-lb. jars extracted honey, and two shallow-frames for extracting. Members class for single 1-lb. jar extracted honey. Schedules from B. M. Clark, Sec., Fox Hill, Radstock. **Entries close August 10.**

August 17 and 18, in "The Quarry," Shrewsbury.—Annual Show of the Shropshire B.K.A in connection with the Shrewsbury Great Floral Fête. Eight open classes for Honey. Entry free for 1-lb. Jar and 1-lb. Section. Schedules from S. Cartwright, Hon Sec., Shawbury, Shrewsbury. **Entries close August 5.**

August 24, at Fleetwood.—Honey Show in connection with Fleetwood Floral and Horticultural Society. Open classes for Six 1-lb. Sections. Six 1-lb. Jars Light Extracted Honey, and Six 1-lb. Jars Dark Extracted Honey. Schedules from Edward Cook, Hon. Sec., Rossall Grange Farm, Fleetwood. **Entries close August 14.**

August 24, at Sandbach.—Honey Department of the Cheshire Agricultural Society's Show, under the management of the Cheshire B.K.A. Open classes for Hives, Sections, and Extracted Honey. Substantial prizes. Bee Lectures and Demonstrations on the showground. Schedules from T. A. Beckett, St. Werburgh's Chambers, Chester. **Entries close August 3 (at double fees to August 10).**

August 24, at Bradford Abbas, Dorset.—Annual Show of the Yetminster and District B.K.A. in the old Vicarage ground. Three open classes, including three 1-lb. jars extracted honey and three 1-lb sections. Schedules (with entry form) from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne, Dorset. **Entries close August 20.**

August 24 and 25, at Leamington.—Annual Show of the Warwickshire B.K.A. in connection with that of the Warwickshire Agricultural Society. Schedules from James Noble Bower, Hon. Sec., Warwickshire B.K.A., Knowle.

August 25, at Llangollen.—In connection with the Sixth Annual Flower Show. Open classes for Six 1-lb. Sections, Six Jars Extracted Honey, and Beeswax. Schedules from Frank Little, Brook Bank, Llangollen. **Entries close August 11.**

August 25, at Montgomery.—Montgomery and District Horticultural Society. Open classes for honey, six 1-lb. sections and six 1-lb. jars extracted honey. Prizes 10s., 5s., 2s. 6d. Entrance fee 1s. each class. Many open classes, flowers, fruit, vegetables. For schedules, apply Mr. W. Jones, Secretary. **Entries close August 18.**

August 27.—Twelfth Annual Show of the South of Scotland Bee-keepers' Association. Five open classes for extracted and comb-honey and wax. Schedule and entry form from Hon. Sec., S. M'Vie, Essex Park Cottage, Dumfries. **Entries close August 20.**

August 30, at Cartmel, Lancashire.—Honey show in connection with the 32nd Annual Show of the Cartmel Agricultural Society. Three open classes for Comb and Extracted Honey (prizes, 15s., 10s., 5s., and 2s. 6d.), and Beeswax (prizes, 10s. and 5s.), along with silver and bronze medals of the Lancs B.K.A. Schedules from W. Cragg, Secretary, Cartmel, via Carnforth. **Entries close August 18.**

September 3 to 10 at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders' (12th) Annual Exhibition and Market. Numerous classes and liberal prizes for comb and extracted honey and beeswax. **Open to all British Bee-keepers.** Special attention is directed to the new **Honey-selling Classes with Free Entry.** Schedules (now ready) from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad-street, London, E.C.

Special Notice.—In connection with the above there will be a *Working Exhibit* illustrative of modern Bee-keeping and Honey-production, including *Demonstrations* with *Live Bees* and extracting honey from combs for sale by skilled experts.

September 15, 16, and 17, at Crystal Palace.—Surrey Bee-keepers' Association Annual Exhibition of Bees, Honey, Wax and Appliances, &c. Twenty-five classes (ten open to all). Increased prizes and medals, Schedules from F. B. White, Secretary, Marden House, Redhill, Surrey. **Entries close September 1.**

INTERESTING PRESENTATION.

On Tuesday, June 21, Mr. C. L. Neave, head clerk at Messrs. Abbott Bros., beehive manufacturers, Southall, was the recipient of a handsome gold watch as a tribute of respect from his employers and fellow employees, on the completion of 25 years' service with the firm. On the inside of the watch was the following inscription: "Presented to Mr. C. L. Neave, by Messrs. Abbott Bros. and employees in commemoration of 25 years' honourable service, 1879-1904, and on the outside of the watch a suitable monogram was engraved.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

(Mrs.) Edward A. Birch (Brandize).—Diminutive Bees from Africa.—The two workers sent are considerably smaller than Cyprians, but not any more brightly-coloured than ordinary pure Italians. They belong to one of the several races of the honey-bee that occur in Africa, some of which were formerly thought to be distinct species to our native *Apis mellifica*, but which, failing the discovery of reliable structural differences, must be regarded as varieties of this species. No doubt they could be kept in hives, but they would rear drones only from combs built from our ordinary pattern of worker-foundation.—F. Sladen.

A Bee Lover (Chester).—Alleged Cruelty to Bees.—We find it difficult to believe that your very strongly-worded communication is intended for publication, feeling, as we do, quite certain that the

writer referred to is as humane as yourself in handling bees, and in all he does as a bee-keeper. Not only is this so, but with regard to the other point on which so much of undue stress is laid, our correspondent stands alone in his criticism of the writer to which reference is made, whose contributions are regarded in an entirely opposite light by the great body all of our readers, along with ourselves.

MAC (Walsall).—Signs of Queen-Mating.—The dead drone sent bears the usual signs of having mated with a queen.

H. OSBORNE MORGAN (Bristol).—Bee-keeping Tourists.—As yours is the first adverse comment we have received with regard to the place, while several bee-keepers have written letters in an entirely opposite strain (though not published) you will understand why we do not alter the rule followed in any case.

BETA (Cambs).—Medicating Bee-food.—1. Absolute phenol is pure carbolic acid in crystals, and may be obtained from any chemist. 2. Neither soluble phenyle nor izal—if used in medicating bee-food in autumn—will cause dysentery in the following spring. 3. Naphthaline is not used in bee-food at all. The best ingredient, however, as a preventive for the purpose of medication is naphtholbeta. 4. The difference between phenol and "soluble phenyle," is (as stated in the "Guide Book") as follows:—"Soluble phenyle is a powerful disinfectant, possessing all the good properties of carbolic acid, but superior to the latter, inasmuch as it is entirely non-corrosive and non-poisonous as regards human beings and animals."

J. E. SHORT (Streatham, S.W.).—Queen-Rearing on the "Swarthmore" Plan.—The system you inquire about, as practised in America by the originator, was fully detailed and illustrated in the B.B.J. of September 17 and 24 last year. This description has since been added to by a further letter from the same contributor (Mr. J. M. Hooker) on the subject which appeared in our issue of May 26 last. These three numbers cover the whole ground, and as they may be had from this office, post free for 4d., there is no reason for reprinting as suggested.

H. CLARKE (Sussex).—Honey for Showing.—Sample is from mixed sources, the colour showing an admixture we take to be *Trifolium incarnatum* (crimson clover). The flavour is fairly good, and it would be suitable for showing in the dark class, but not in competition with light honeys.

G. S. (Staffordshire). — Bees and Wormwood.—There is nothing in wormwood to make it objectionable to bees "if put among the quilts of hives," as stated, "to keep away moths"; but we are not so certain about its securing the end you have in view. In fact, we never heard of "wormwood" as a preventive of moths.

WAT (Lanarkshire). — Bee Nomenclature. —Bee sent is a young well-marked Italian, and apparently a virgin, though possibly just mated, but not laying. The insect is too dry and hard for post-mortem.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul Brood."

In urgent cases (and where possible) we undertake to "wire" replies as to F.B. if six stamps are sent to cover cost of telegram. All letters should be addressed "Editors," not "Manager."

E. (Cheshire).—The dead brood in sample is chilled only, but we do not recommend you to preserve any of the combs in which the cells contain dead larvæ for future use. We should burn all combs so occupied and melt the remainder down for wax, as they are old and need renewing.

E. C. R. (Harlow).—Comb contains only pollen and bee-food. No disease.

A. B. (Ayrshire).—Judging by small sample of comb, there is no disease in hive from which it was taken. A larger piece, with more sealed cells, might reveal worse conditions, but sample is free from foul-brood.

H. C. K. N. (King's Norton).—There is foul-brood of some standing in two or three cells of comb sent, but it is not a bad case if other combs are no worse than sample.

Special Prepaid Advertisements.

Twelve words and under; Sixpence; for every additional Three words or under, One Penny

Advertisements for current issue must be received by first post on Tuesday.

GEORGE ROSE, LIVERPOOL, can place some Cwts. of LIGHT HONEY and few SECTIONS, if any Bee-keeper will write him. Prices, &c., at once, for prompt delivery.

SELECTED "NEVER-SWARM" FERTILE QUEENS, in Introducing Cages, 4s. 6d. With strong nuclei, 10s. 6d. each. HARRIS, Wavendon, Bletchley. B 94

NEW CLOVER HONEY in 28lb. tins, £3 5s. Cwt.; sample, 2d. SECTIONS, 7s. 6d. dozen. H. HARDING, Bois Poultry Farm, Chesham, Bucks. B 95

GENTLEMAN REQUIRES BOARD RESIDENCE with Bee-keeper, large scale, in Scotland or North England. Terms moderate. "M.," Edenvale, Cumberland Walk, Tunbridge Wells. B 96

A LADY REQUIRES BOARD and LODGING with a Bee-keeper for the latter part of August and September, within easy distance of London, S.E. or S.W. preferred. Reply, stating lowest terms, to G. M. KOSZELSKI, XXth Century Club, Stanley-gardens, W. B 97

WANTED, 4 or 5 lb. lots of DRIVEN BEES early in August. State price per lb., delivered at Goathland, near Whitby. Rev. R. N. LAMB, Burton Pidsea Rectory, Hull. B 98

STRONG, Healthy, Natural SWARMS, 12s. 6d., including skeps. Guaranteed safe arrival. CADMAN, Codsall Wood. B 99

WILL EXCHANGE handsome young ENGLISH SETTER, 3 months old, highest pedigree, grandson of Champion "Rumney Rock," for well-filled Sections or two Strong Stocks in bar-frame hives, guaranteed healthy. Dr. WALKER, Kirkby Stephen. C 1

Editorial, Notices, &c.

LINCOLNSHIRE B.K.A.

ANNUAL SHOW AT GRIMSBY.

The annual show of the Lincolnshire B.K.A. was held on the 14th and 15th insts. in connection with the Agricultural Society's Show at Grimsby. There were 142 entries and an excellent display of both extracted and comb honey, four very fine trophies and two collections of appliances were shown.

The judges, the Rev. Sidney Smith and Dr. Percy Sharp, awarded the prizes as follows:—

Trophy of Honey in any Form, Staged on 4 ft. Square.—1st (and Silver Medal), W. Patchett, Cabourne, Caistor; 2nd (and Bronze Medal), W. Hatliff, Thoresway, Caistor; 3rd, D. Seamer, Grimsby.

Twelve 1 lb. Sections (Open Class).—1st, A. W. Weatherhogg, Willoughton; 2nd, W. Patchett; 3rd, Tom Sells, Uffington; 4th, W. Hatliff.

Twelve 1 lb. Jars Extracted Honey (Open Class).—1st, T. S. Holdsworth, Kirton-in-Lindsey; 2nd, W. Patchett; 3rd, A. E. Russell, Louth; 4th, W. J. Cook, Binbrook; h.c., A. W. Weatherhogg.

Twelve 1 lb. Sections, Open to County of Lincoln, Members of Lincs B.K.A., and Lincs Agricultural Society.—1st (and Silver Medal), A. W. Weatherhogg; 2nd, E. Hart, Thoresway; 3rd, D. Seamer; 4th, T. Sells.

Twelve 1 lb. Jars Extracted Honey (Members as above).—1st (and Silver Medal), T. S. Holdsworth; 2nd, W. Patchett; 3rd, W. J. Cook; 4th, G. Markham; h.c., A. E. Russell and A. W. Weatherhogg.

Twelve 1 lb. Jars Extracted Honey (other than Light), Open to County of Lincoln, and Members as above.—1st, G. Markham; 2nd, F. W. Frusher, Crowland; 3rd, F. G. Davy, Louth.

Twelve 1 lb. Jars Extracted Honey (Novices only), in the County of Lincoln, and Members as above.—1st, E. Hart, Caistor; 2nd, J. Boutoft, Binbrook; 3rd, H. W. Thompson, Binbrook; 4th, W. J. Seamer; h.c., J. G. Green, Horncastle.

Twelve 1 lb. Jars Granulated Honey.—1st, T. S. Holdsworth; 2nd, G. Markham; 3rd, D. Seamer; h.c., A. E. Russell.

Bees-Wax (not less than 3 lb).—1st, W. Patchett; 2nd, F. W. Frusher; 3rd, F. Harris, Boston.

Observatory Hive, Stocked with Bees and Queen. — 1st, D. Seamer; 2nd, T. W. Swabey, Lincoln; 3rd, E. H. Taylor, Welwyn.

Collection of Hives and Appliances.—1st, W. P. Meadows, Leicester; 2nd, E. H. Taylor.

Complete Hive for General Use (price not to exceed 25s.). — 1st, W. R. Garner, Bourne; 2nd, E. H. Taylor; 3rd, W. P. Meadows.

Complete Hive for General Use (price not to exceed 12s. 6d.).—1st, W. P. Meadows; 2nd, E. H. Taylor; 3rd, W. P. Meadows.

Bee Appliances, recently introduced.—1st, W. P. Meadows; 2nd, W. P. Meadows.

Lectures and demonstrations in the Bee-tent of the Association were given on both days by Mr. W. Herrod, and were well attended.

CAMBS. AND ISLE OF ELY B.K.A.

At a largely attended meeting, held recently at the Livingstone Hotel, Cambridge, it was resolved that 7s. a dozen should be the minimum price at which light-coloured sections of comb-honey weighing not less than 14 oz. were to be sold. In connection with this the chairman announced that in the event of this figure not being obtainable, he would buy at that price from any member of the Association. As one of the largest traders in the town had announced that 4s. 6d. to 5s. was what he intended giving this year, and 6s. having been the maximum price obtained in recent years, the members of the Association are gratified that the executive have been able to obtain them this great advantage. This alone should induce every bee-keeper in the county to join without further delay so as to provide funds for the furtherance of bee-keeping and the interests of bee-keepers in the county. A case of damage done by bees was reported from March, the member fortunately being insured. The Hon. Sec., in reporting the progress that was being made stated that he had not yet visited an apiary in the county that was free from foul-brood.—G. E. Rogers, Hon. Sec.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

AMONG THE BEES.

FOUL-BROOD LEGISLATION.

[5585.] The manner in which several prominent bee-men have treated this subject when under discussion in our pages has been a matter of surprise to me. When the B.B.K.A. some years ago made such a gallant attempt to secure the passage of a Bill in favour of its extirpation, these

gentlemen did all they could with voice and pen to render all the labours of the parent Association nugatory. Now, however, when the subject is again brought on the carpet, and likely to be supported by the central executive, douches of cold water are attempted to be administered, and we are treated to the old bugbears of cost, interference with individual rights, doubts of its efficacy, and platitudes about keeping the fell scourge at bay by individual effort, instead of by compulsion and federated combination. Of what use is care, cleanliness, new blood, strong stocks, special treatment, when your skep neighbour over the hedge has a hotbed and hatchery of the disease capable of contaminating a whole countryside, so that your strong stocks are decimated in spite of your persistent and painstaking efforts? Only the other day, in examining the apiary of a gentleman recently started in bee-keeping we came on a colony actually reeking with the disease! The stock was a swarm of '92 on comparatively new combs in a new hive, with abundance of bees and an excellent queen. Possibly their very strength proved their undoing, because I doubt not they had contracted the disease in some of their forays in search of stores when they robbed some weak contaminated lot. Here is an enlightened bee-keeper who has spent considerable sums of money on his hobby, one who has a sincere love for the bees, and who engages in the pursuit *con amore*, in a fair way of having his ardour damped and his enthusiasm checked almost at the very outset, from causes over which he has no control. Nothing short of repressive measures of a drastic type will cure such cases, which are everywhere injuring apiculture by disheartening or disgusting its votaries and driving them out of the ranks. "Cranks" are common in all classes, and we have a good few in the bee-keeping line. But in spite of these I trust the hands of the parent Association may be strengthened, so that we may reap the fruits of what they sowed years ago.

Twenty Pounds of Bees.—The writer of the letter on "Swarms Uniting" (5555, page 245) will do me a special favour if he will kindly record in our JOURNAL, at the close of the season, the after-history of his two twenty-pound swarms! Theoretically, they should yield a very large weight of surplus honey, but I shall be much surprised indeed if they do, and I am morally certain that if he had divided the swarms into four or more lots, each of these divisions would, if hived separately, do as good work as his mighty battalions! I do not know if bee-keepers as a whole will agree with me, but I have a confirmed opinion that swarms of 5 lb. or 6 lb. at the most will do as much, and perhaps better, work than others, scaling, it may be, double that weight.

Bees and Parsley.—After reading the account given by "H. V. F.," Dublin (5550, page 244), of bees' antipathy to cut or bruised parsley, I went the other day and pulled a row of over twenty yards, very considerably crushing the plants as I handled them. The odour must have had an excellent opportunity of impregnating my cuticle, and I went directly to several hives, placing my bare hands in front of and amongst a stream of bees issuing and returning, but they went on plying their task apparently oblivious of anything being wrong. Pursuing the test, I opened a hive, and, just wafting a little smoke over the tops of frames, I parted those in the centre and picked up a pin, purposely deposited on the floor-board. Neither hand, though almost touching the seething mass, was stung. I add no comment.

Bees carrying Water.—"I always thought that the incoming of nectar and water-drinking by the bees were closely allied, and that the number and frequency of their visits to the water were a criterion, at least approximately, of the quantity of honey being stored." Thus writes "H. V. F." (page 244). This is a fallacy. Mr. Woodley, in commenting on it in "Notes by the Way" (page 253), starts all right, but flounders in the last clauses of his sentence, explaining that "the ingathering of the food is of greater moment to them than their drink." The water-drinking has little co-relation to honey-gathering but is an accompaniment of *brood-raising*. It is greatest in spring and early summer, because of water being required to tone down and liquefy the thick honey stored in the combs all winter. In fact it is a necessity of active breeding in early spring that a supply should be carried in, because then only can the young bees be provided with suitable food. Later on, when honey-gathering is being actively prosecuted, water is not urgently required, because nectar, as carried in from the fields, contains even an excess of moisture, which has to be evaporated before the honey is finally stored. If either writer has noticed any special shortage of bees at the water-troughs this or last season, it might be explained by the excess of moisture all over the neighbourhood; or it may be by the bees storing honey in a thinner form last year owing to the watery season.

Who's Who? — At the International Women's Congress at Berlin, Mrs. Perkins, an American, prophesied the speedy end of male-rule, but was good enough to add—perhaps to mollify us—"Men need not fear that they will be placed under the yoke. Women do not intend to imitate the policy of the bee-hive in relation to the queen-bee." The metaphor or hyperbole

is a little mixed, and more than one meaning might be read into the words. We who are mere men, in spite of the "new woman," will surely be allowed a voice in this matter before we are turned into simple drones.—D. M. M., Banff.

FOUL BROOD LEGISLATION.

[5586.] If "A Devon Bee-keeper" (5578 page 272) in the last issue of B.B.J. is really a member of the Devon B.K.A., which I have reason to doubt, he should be aware that at the last annual general meeting a unanimous resolution was passed in favour of legislation. The Council were therefore justified in giving effect to it by adopting the Bill when it came before them for consideration. It is in the power of your correspondent, if he is a member of the Association [He is an old member of the D.B.K.A.—Eds.], and can find adequate support, to call a general meeting, when his views will receive attention. In the meantime, it would not be amiss if he and others who have written in opposition to the Bill were to procure a draft of it from the secretaries of their associations, when I think that they will see reason to modify their prejudices.

The Bill gives no authority to any official to interfere in any way with anybody's apiary, except in cases where the owners have notified the existence of disease, or where there are reasonable grounds for the belief that it does exist. Under a penalty of from two to five pounds, notice of disease must be given by the owner. The County Councils have power to make bye-laws for the details of the enforcement of the Act, but there can be no doubt that they will in the main be guided by the advice of the associations, or where there may be no associations, by that of recognised authorities on bee-keeping, or intelligent local bee-keepers. A qualified bee-keeper would probably be left to work out his own cure, while in cases of ignorance sound treatment would be enforced.

There is no provision in the Bill, as I read it, for proclaiming a district infected, nor would such proclamation be of advantage; but infected bees, bee products, or appliances cannot be removed from the premises under a penalty of from two to five pounds.

Generally speaking, nothing is proposed that would interfere with the reasonable freedom of any good bee-keeper, and on the other hand the Bill would confer on the County Councils, and through them on the bee-keepers' associations, a long-desired control over the few obstinate, usually ignorant, and always mischievous individuals who here and there are centres of infection and a standing menace to the local bee industry.

It would be rash to contend that this Bill, any more than most others that come before Parliament, is perfect. I myself should like to see it amended in the matter of compensation. In my opinion, 10s. is too great a sum to pay for a skep of bees in such a diseased condition as to necessitate destruction. I consider 5s. ample, either for such a skep or for the bees, combs, etc., of a frame hive in a similar condition, and I believe that this sum has hitherto been considered sufficient in Ireland, where the authorities do not err on the side of harshness. If the hive itself is worth saving it can be disinfected and preserved. Compensation should be kept as low as possible, not only to protect the ratepayer, but so as to discourage the carelessness and ignorant management that allows disease to take firm hold of an apiary. There will probably be time to consider this, and perhaps other points, before the Bill comes up for final judgment. I am convinced that on the whole legislation is desirable.—H. J. O. Walker, Lieut.-Col., Lee Ford, Budleigh Salterton.

[5587.] We have now been favoured with three letters—Nos. 5540, 5561, and 5577—from Mr. W. J. Farmer, who in the last of these states "he has never had foulbrood in his apiaries." First, I would sincerely congratulate him, and hope that he may never have any experience of it. Secondly, I should consider this immunity from this pest all the more reason why he should thankfully endeavour to assist those who have suffered, and do suffer, to obtain a remedy to protect themselves from its ravages. Thirdly, it is evident from his last letter that he neither understands the object of the suggested legislation or the treatment of the disease. If the proposed Bill succeeds in passing, it will give bee-keepers' associations the power to prevent those known to have foul brood from trafficking in bees, and sending them to all parts of the kingdom as they do now, spreading the disease without let or hindrance, and will enable associations to protect their members' bees by compulsory inspection of those apiaries not belonging to members, and which are in many cases known to be the principal source of infection for the whole neighbourhood. At present whole districts are rendered unfit and impossible for successful bee-keeping by the selfish action of one or two bee-keepers, who will not follow any advice, do not belong to any association, and refuse to allow any expert to inspect their bees at any time, and yet bee-keepers can be found who have had no experience of the worry, trouble, and expense caused by the disease, and

know nothing whatever about its treatment, to write such letters as mentioned above, advising us what to do to prevent it and stating that they do not want a Government inspector to manage their bees, and refusing beforehand to carry out his advice.

All fair-minded bee-keepers will agree—

1. That all stocks and swarms of bees having foul-brood should receive proper treatment.

2. That owners of such bees should not be permitted to send them away or sell them to other persons.

This is the gist of the whole proposed legislation, and all bee-keepers having the welfare of the industry at heart will do well to support the measure by urging their county councillors to petition the Board of Agriculture in favour of the Bill, and obtain the power to ensure the above two items being carried out for their protection. I note that another Devon bee-keeper, in letter 5578, and one in Cambs., 5580, appear very much afraid of any inspection of their apiaries. Why? If an apiary is in good order and healthy it should be a pleasure to show it to anyone, but if not, the objection can be understood. I also note that Mr. W. T. F. does not *think* that foul-brood "is so prevalent as some make out." I do not think; I *know* it is much *more* prevalent than most bee-keepers are aware of, and am sure our Editors can easily confirm this, and those who are in touch with the expert work of the large associations know well its extent and ravages, and how it hinders their expansion, and I hope some of these gentlemen will let us know how they find things in their parts of the country. Then perhaps such letters as 5577, recommending us to "*thoroughly disinfect* all brood combs annually" will cease, and we shall all see that such legislation as is proposed is absolutely necessary for the protection of the industry in most of the districts where bees are largely kept.—F. J. CRIBB, Vice-President of Lincolnshire B.K.A.

[5588.] In reply to Mr. W. Woodley (5576, page 271), I have just received a copy of "The Ohio Foul-brood Bill," and Mr. E. R. Root writes, in *Gleanings*, page 484, that "it is very similar to the law, that has given such good results, in Colorado and California, and I only quote this as a set-off to his reference to the McEvoy statement (let Canada alter its Bill if it needs it!); but I doubt very much if any one wants to practice the McEvoy system in England—certainly Cumberland does not. Yes, disinfect the bees, too, by the Cowan system of starving for three days, or by running the bees on to full sheets of foundation (not comb), and feed well with medicated syrup, and place naphthaline in the hives. Our experts have reduced disease in the county to a very large extent. I have myself given a trial to various systems of treatment and would specially mention Mr. Cowan's soluble phenyle spray treatment, but it takes more time than most bee-keepers would care to give. Without legislation, the stocks of those we treat for disease are always in danger of getting it back again, through some bee-keeper who cares nothing whether he has diseased stocks or whether he infects his neighbour's, and it is not just that a useful industry should be spoilt by a minority of that kind. I am afraid that Mr. Farmer would need legislative powers to enforce his chief precautions.

Might I refer "A Devon Bee-keeper" to my letter (No. 5565, page 262)? He will see that his nightmare of a Government official is reduced to his own association expert, under his own executive committee's directions, who will naturally do all they can, not to hurt any one's feelings by injudicious use of the Act.—GEORGE M. SAUNDERS, Hon. Sec. and Treasurer Cumberland B.K.A.

BEE-KEEPING IN JAMAICA.

QUARANTINE REGULATIONS.

[5589.] I shall be glad if you would be so good as to recommend what should be done in the way of establishing quarantine regulations in the case of bees, combs, hives, honey, and wax imported from countries known to be infected by "foul brood." It has been brought to my notice that there is no "foul brood" here at present, but that there is some danger of its being introduced from neighbouring islands, and your recommendations would be of much value.—W. FAWCETT, Director, Department of Public Gardens and Plantations, Kingston, Jamaica, June 27, 1904.

[Not being conversant with Jamaican law, we cannot suggest any way of prohibiting the importation of bees and bee appliances, unless they can be met by some legal enactment in the form of magisterial order, or local bye-law. It is within our knowledge, however, that bees, hives, and appliances are extensively imported into Jamaica (from America mainly), and that several firms advertise this fact. We have before us as we write, a recent copy of the *Jamaica Times*, and see therein advertised that queen bees are offered for sale from imported Italian mothers—at 20s. per dozen by one firm; while a "Honey Company, Limited," are prepared to supply everything required in the apiary. It thus becomes clear that "quarantine" would do little or no good; it would need prohibition to effect the intended purpose. —EDS.]

Queries and Replies.

[3490.] *Strengthening Weak Stocks.*—I shall be obliged if you will inform me through your paper: 1. What is the best time to add a fresh swarm to a weak hive? 2. Also whether either of the queens should be first killed, or left to settle the matter themselves? I send name and sign—"W. S. H.," Hereford, July 11.

REPLY.—1. As the swarming season in your county will be over in mid-July, we assume that by "fresh swarm" a driven lot of bees is meant, in which case the best time for uniting is early autumn or when the year's honey-gathering is about over. We advise, however, that care be taken to see if the weak stock is worth strengthening. In other words, to ascertain the cause of weakness. This may be owing to age of queen, or perhaps from disease, in which case the stock is worthless. 2. The best queen should always be preserved when uniting bees.

[3491.] *Bee Parasites.*—I have two hives of bees, and find they are both affected with an insect on the bees. I caught a young queen this morning, and she had seven of them on her round her waist. I dropped some of Jeyes fluid—about one pint to 500 parts of water—on them and they fell off. I should like to know what to do to clear the two hives, which are strong in bees. I can find nothing in your "Guide-Book" about them, or I would not trouble you. — T. STREET, Bristol, July 11.

REPLY. — The parasite you mention is fully described on pages 159 and 160 of "Guide Book." It is a *Braula cœca*, or blind louse, "a small, reddish-brown parasite, which attaches itself to the bee, and is sometimes found in large numbers on the queen." The young lice remain on the floor-board until they have the opportunity of climbing on a passing bee. Strong fumigations of tobacco will dislodge them, followed by cleaning the floor-board and washing it with carbolic solution.

[3492.] *Swarms Uniting in "Wells" Hives.—Italian v. British Methods of Packing Swarms.* — Would you be good enough to advise me in B.B.J. under the following circumstances: — I had two swarms of bees in May from advertisers in B.B.J. Messrs. Malan Bros., Italy, put in a "Wells" hive, and they have gone on so well that I ordered, and received on July 5, two more swarms. These also were hived in a double hive, and seemed to be all right, but an examination two days later revealed the fact that both swarms had united, and one side of the hive was empty! After an exhaustive search I was convinced that I had lost a queen, only one being present, though how, when, or where this accident occurred is a mystery.

I knew that it was useless to divide them, so ordered another 1-lb. swarm, which I intend to place in the vacant compartment of the hive.

The position will, therefore, be 4½ lb. bees in one side, 1 lb. in the other, and I want you to tell me how I had best proceed to equalise them, so as to have about the same number of bees each side of the perforated division-board. They seem to be working well; and on arrival of second lot I propose to remove a couple of built out-combs from the established lot to give new-comers a start.

I should also add that I consider our bee-men have something to learn from those on the Continent. Italian bees arrive by post beautifully packed on combs, hardly a dead bee, no returning of boxes, etc.; whereas, English bees (at least, what I have bought) come by rail in heavy, cumbrous boxes, packed up as if they had got to be sent to Australia; in one case it cost me 1s. 6d. to send the empty swarm-box back! Thanking you in anticipation for this, and also previous help. I send name and address, and sign myself — PROBATIONER, Worcester, July 15.

REPLY.—You can do nothing by way of equalising numbers beyond giving a means of intercommunication to the bees in each compartment. This might be managed by placing a partly-filled rack of sections from one of the first-named "May swarms" (now doing so well) and allowing the bees of the 4½ lb. swarm to mingle with those of the smaller lot, as is usual on the "Wells" system. In this way the 1-lb. swarm might get additions to their numbers; but any attempt on your part to equalise would probably work mischief.

[3493.] *Superseding Queens.*—Will you kindly give me, through B.B.J., your opinion, 1, How long a queen should be retained, in order to get the best results in honey yield from the stock every season? My queens raised in August last year have proved to be A1 this season, very prolific and splendid workers. Do you consider they would do as well next year under equal conditions? I have in my mind a line recently published in B.B.J. to the effect that queens which are very prolific first season often turn out below the average in their second. Do you consider this about right? I see one contributor (page 272, July 14, 1904) advises re-queening every fourth year. Is this not rather long to retain queens to get best results in honey (I note he is dealing with foul brood question). 2. What is the best way to get

run honey into "show condition." Would straining it through muslin two or three times be likely to reduce the aroma and flavour? Thanking you for past favours and in anticipation for this, I sign myself PROGRESS, Oxon, July 16.

REPLY.—1. A queen is usually at her best when from one to two years old, after which her laying powers decrease. In your case the queen appears to be a good one, and we should hesitate to supersede her until after the second year. The fourth year is too long to wait and, with our methods of forcing few queens are worth keeping by that time. 2. The best way is to strain through flannel. No loss of aroma or flavour need be feared.

[3494.] *Moving Bees in Skeps.* — I am going to get three stocks of bees in skeps, and they are about a mile from here and they must be removed within the next fortnight. Will you kindly let me know in your valuable paper, BRITISH BEE JOURNAL, of which I am a constant reader, the best way I can remove them and whether it is advisable to get them at this time. Thanking you in anticipation of an answer in this week's paper. — D. J. THOMAS, Llanelly, July 18.

REPLY.—The skeps can be easily moved. Blow a few puffs of smoke in entrance, then lift skep, turn it over, and cover it with cheese cloth, tieing this round the skep securely with string. Then turn over and carry carefully to place they are to occupy, putting them on the stands. The evening is the best time to move bees when they are all at home. Untie the cheese cloth and allow the bees to fly. As it is only a mile from where your bees come, place something in front of entrance such as a piece of glass to create an obstruction, and make the bees notice change of place when they fly out.

[3495.] *Transferring Bees.* — Kindly answer in B.B.J. the following:—I have a strong stock of bees in a straw skep that I am desirous of transferring into a frame-hive. Would you advise the present time as suitable for this, and would the bees succeed in transferring their brood-nest below, which will be fitted with full sheets of comb foundation, so that skep can be removed at end of season. Thanking you for former advice, which was appreciated by—RONDO, Yorks, July 16.

REPLY.—It is too late in the season now to allow the bees to transfer themselves by placing skep above a frame-hive. Your best plan is to drive bees and queen from skep and place them in frame-hive fitted with wax foundation. Place excluder zinc on top, and on this the skep, if it contains any quantity of brood. Wrap up warmly, and if the weather keeps fine and warm, the brood will hatch out. There is, however, a risk, if cold weather should set in, of the bees re-entering the skep to cover the brood, leaving the queen to perish of cold and hunger below. If there are only small patches of brood these could be cut out and hung in a frame in body-box until hatched out, and in such a case the skep need not be placed on the top.

[3496.] *Queens Ceasing to Lay in Summer.*—My five stocks of bees were in excellent order at the end of April, with seven or eight frames of brood in all. I supered three of them about May 20 with crates of shallow-combs which the bees took to at once. They soon stored a considerable amount of honey in them. I kept my two others under close observation till about mid-June, as there was a faint trace of foul-brood in one, and I could not find the queen in the other. No eggs were laid in either hive for about three weeks, which I put down in the one case to a rather severe spraying. I gave them with phenyle. However, after the three weeks' interval, eggs were deposited again in this and also in the other hive, which I had thought queenless. The latter queen is one of my own rearing and two years old. Now for my point. Of my other three stocks, one, I am pretty sure, swarmed, as I noticed a sudden cessation of activity; but I am nearly certain the others have not. The bees, however, are dwindling very much, and I wonder whether the same thing happened as in the two hives I had under observation, i.e., the queen ceased laying for a period. Can it be that owing to the hot days and very cold nights of late May and early June the bees stored a lot of honey downstairs and so cramped the brood-chambers? They did to some extent in the two under observation, but that was due, I thought, to the want of supers. I shall no doubt get a clue to the enigma when the hives can be gone through again, but I should like to know if any of your readers have had a similar experience this season? I send name, etc., and sign—J. B., Solihull, July 15.

REPLY.—With regard to the cessation of egg-laying in the two stocks first named, it may be readily accounted for in the "spraying" mentioned, but the other three hives stand on an entirely different footing, and it is not at all likely that the combs in brood-chamber would be filled with honey with plenty of storage-room overhead. It is more probable that swarms have issued and flown off unseen.

[3497.] *Bees Raiding Sweet-shops.*—When the field-forage fails here, our bees raid the sweetstuff stalls in the market-place. Hundreds of them are destroyed by the

stall-holders, which must be a serious loss to the hives at a critical time when every bee is wanted to go into winter quarters. Can you suggest anything whereby the bees could be diverted from their raiding expeditions to the sweets? Could syrup as a counter attraction be placed at some distance from the hives? Would it be advantageous to close the hives to a single bee-way, so as to retard the bees in their journeys? I presume it would be impracticable to entirely close the hives, on market days, with perforated zinc. I and others here would be glad of your advice on this, to us, very important point. Thanking you again for past favours, I send name and sign—R. J. T., Romford, July 15.

REPLY.—We fear that any attempt to afford a counter-attraction by open-air feeding at this season would lead to still greater evils by causing "robbing" and upset in your own apiary. "Closing hives entirely on market-days" would be quite as bad or worse in its effects. Why not try and induce the stall-holders to cover up their wares with coarse white muslin for a time if bees begin to trouble them?

[3498.] *Formalin and Foul-brood.*—This is my first active season with bees, which I have conducted on the method explained by Colonel Walker, and I think I can claim to have been fairly successful but for one unfortunate incident. In buying my stocks I imported a case of foul-brood. After reading the high praise bestowed by some of your correspondents on the virtues of formalin, I have almost determined to get an air-tight chamber constructed in order to fumigate my hives and all appliances at the end of each season. Also after giving the bees clean hives in the spring the vacant hives will be thoroughly fumigated and made ready for swarms. I desire replies to the following:—1. An expression of your opinion as to the effectiveness of the above treatment as a precautionary measure against foul-brood, and can you suggest a more effective means? 2. Is there any objection to fumigating with formalin combs intended for the storage of surplus honey next summer? 3. Is there any objection to spray with soluble phenyle combs intended for the same purpose as No. 2? I append my name for reference and sign—BEGINNER.

REPLY.—There is no harm in your trying the experiment you propose. Opinions differ as to the value of formalin, and experiments show that the spores of foul-brood are only destroyed after very prolonged treatment to the fumes. 2. No. 3. **None at all. On the contrary, it would be beneficial to do so.**

Echoes from the Hives.

Truro, Cornwall.—The season here up to July 7 has been very disappointing. In May the conditions were good, but in the month of June the bees got scarcely enough to keep them. Two of my stocks have done well, but unless the clover season lasts up to the end of August, as it did last year, the result will be very small as regards honey obtained. The bees are now doing fairly well, but clover is scarce, and though the limes are out the bees on them are very few—they prefer the clover.—W. J. FARMER.

Hatfield Heath, Harlow, July 18.—The prominent features in this season's work in this district are the ravages of foul-brood. The unprecedented number of swarms that issued in May, and the high quality of the bulk of the honey taken, though the quantity hardly equals that of an average season. The farmers now occupying the land do not keep flocks as they did in years past, so very little white clover is grown, and but for a crop of honey-dew sandwiched between the first crop of sanfoin and the aftermath, bees would have been out-of-work indeed. We have lately been wanting rain almost as badly here as we were wanting fine weather twelve months ago. Strong east winds have dried up the nectar in the second growth of sanfoin, and the mowing-machine is now doing its work.—W. LOVEDAY.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

July 27, at Henbury, near Bristol.—Annual Show of the Henbury District Bee-keepers' Association in connection with the Horticultural Society's Exhibition. Several open classes with good prizes (two classes with free entry). Schedules from the Hon. Sec., J. Atkin Waller, Pen Park, Westbury-on-Trym, near Bristol. **Entries close July 22.**

July 27, at Paignton.—Annual Show of Honey, Wax, and Appliances of the Devon Bee-keepers' Association, in conjunction with the Exhibition of the Paignton and District Gardeners' Association. Thirteen open classes. Schedules from the Hon. Sec., C. E. Scholefield, Heathfield, Chudleigh, S. Devon. **Entries close July 22.**

July 27 and 28, at Cardiff.—Glamorgan B.K.A. Show of Honey, Wax, and Appliances in connection with the Cardiff and County Horticultural Society. Prizes (open to non-members) for Comb and Extracted Honey, Appliances, Frame Hive, Wax, Observatory Hive, and Comb in Fancy Design. Medals and money prizes. Schedules from Wm. Richards, Gabalfa, Cardiff. **Entries close July 21.**

July 29, 30, and August 1 and 2, at Southport.—Annual Show of the Royal Lancashire Agricultural Society. Liberal money prizes are offered for honey along with silver and bronze medals of the B.K.A. and also of the Society. Open classes for Honey.

Trophy, Sections, Extracted Honey, Beeswax, Honey-Confectionery, Bee Flowers, Instructive Exhibits in Bee-Culture, &c. **Entries closed.**

August 1 (Bank Holiday), Windsor District, Berks B.K.A.—Annual Show of Honey and Bee-Appliances in conjunction with the Clewer Horticultural Society, in the grounds of Clewer Manor (by permission of E. B. Foster, Esq., J.P., C.C.). Open classes for Observatory Hive, Twelve 1-lb. Sections, and Twelve 1-lb. Jars Extracted Honey. Also classes for Berks only, and for Windsor District only. Schedules from W. S. Darby, Hon. Sec., Consort Villas, Clewer. **Entries close July 23.**

August 1 (Bank Holiday), at Cambridge.—Honey Show of the Cambs. and Isle of Ely B.K.A. Eleven classes with good prizes, including one for "Display of Honey," prizes 30s., 20s. and 10s. Also open gift classes for single section and single 1-lb. jar extracted honey. Schedules from G. E. Rogers, Hon. Sec., "Beeholm," Newnham, Cambridge. The Association will hold shows at **Trinity College Gardens, Cambs.**, on **July 12**, and at **March** on **July 26**, in connection with the Agricultural Society. Full particulars from the Hon. Sec. as above.

August 1 (Bank Holiday), at Andover.—Show of the Andover and District B.K.A. in connection with that of the Horticultural Society. Classes for twelve 1-lb. sections, twelve 1-lb. jars extracted honey, and honey-comb design. Three open classes, first prizes, £1 in each. Schedules from Rev. E. R. Iremonger, Hon. Sec., Clatford Vicarage, near Andover. **Entries closed.**

August 1 (Bank Holiday), at Melton Constable Park.—Annual Show of the North Norfolk B.K.A. Schedules from the Hon. Sec., C. J. Cooke, Edgefield, Melton Constable. **Entries close July 25.**

August 2, 3, and 4, at Dudley.—Annual Show of the Dudley Horticultural Society. "Gift class."—The honey section includes a single 1-lb. jar extracted honey, first prize 20s.; second, 10s.; third, 5s. Schedules from Howard Dickinson, F.R.H.S., Horticultural Society, Dudley. **Entries close July 29.**

August 3 to 5, at Huddersfield.—Show of Honey, &c., in connection with the Royal Yorkshire Agricultural Society. Schedules and form of entry from Hon. Sec., John Maughan, Blake-street, York.

August 4, at Kingsthorpe, Northants.—Honey Show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar of honey. (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Hon. Sec., Kingsthorpe, Northampton. **Entries close August 1.**

August 4, at Madresfield.—Worcestershire B.K.A. Annual Show of Honey and Appliances in connection with the Madresfield Agricultural Show. Open classes for (1) Stock of Bees in Observatory Hive; (2) For complete Frame-Hive; (7) For 6-lb. Jars of Extracted Honey. Schedules from George Cook, Bastonford House, Powick, Worcester. **Entries close July 30.**

August 10, at Wye.—Kent Honey Show.—Several classes for Extracted and Comb Honey, Trophy, Wax, Mead, Cakes, &c., &c. Liberal cash prizes and silver medals. Open Classes for Single 1-lb. Jar Extracted Honey (Light); Ditto (Dark); Single 1-lb. Section, with prizes of 20s., 10s., and 5s. in each class. Bee Demonstrations, Horticultural Show, Cycle Sports, &c. Schedules from J. Tippen, Secretary, Wye, Ashford, Kent. **Entries close August 5.**

August 11 at Bath.—Annual Show of the Bristol, Somerset, and South Glos. B.K.A. Seven open classes for honey, &c. Cash prizes to value of £8 11s. Schedules from Mr. J. W. Brewer, 26, Lambridge-place, Bath. **Entries close August 3.**

August 11, at Goole.—Annual Show in connection with the Goole Horticultural and Agricultural Society. Six open classes, including separate classes for light and dark extracted honey. Good prizes and low entry-fee (viz., 6d.). For schedules, apply to Secretaries, J. Luddington and H. S. White, Lindum House, Goole. **Entries close August 6.**

August 13, at Lancaster.—Show of Honey, &c., in connection with the Lancaster Agricultural Society's Annual Show. Open classes for six 1-lb. sections; six 1-lb. jars extracted honey (light); six 1-lb. jars extracted honey (dark); and beeswax. Local class for three shallow frames. Lancs. B.K.A. silver and bronze medals and other specials. Schedules from Thos. Armitstead & Son, Lancaster. **Entries close August 4.**

August 13, at Burry Port.—Honey Show in connection with the Burry Port Horticultural Society, South Wales. Six open classes, including one for single 1-lb. jar extracted honey, with free entry. First prize, 12s. 6d.: second, 7s. 6d.; third, 4s.; fourth, 2s. **Entries close August 9.**

August 17, at Radstock, Bath.—Honey Show in connection with the Radstock and District Horticultural Association. Open classes, three prizes in each, for six 1-lb. sections; six 1-lb. jars extracted honey, and two shallow-frames for extracting. Members class for single 1-lb. jar extracted honey. Schedules from B. M. Clark, Sec., Fox Hill, Radstock. **Entries close August 10.**

August 17 and 18, in "The Quarry," Shrewsbury.—Annual Show of the Shropshire B.K.A. in connection with the Shrewsbury Great Floral Fête. Eight open classes for Honey. Entry free for 1-lb. Jar and 1-lb. Section. Schedules from S. Cartwright, Hon. Sec., Shawbury, Shrewsbury. **Entries close August 5.**

August 24, at Fleetwood.—Honey Show in connection with Fleetwood Floral and Horticultural Society. Open classes for Six 1-lb. Sections. Six 1-lb. Jars Light Extracted Honey, and Six 1-lb. Jars Dark Extracted Honey. Schedules from Edward Cook, Hon. Sec., Rossall Grange Farm, Fleetwood. **Entries close August 14.**

August 24, at Sandbach.—Honey Department of the Cheshire Agricultural Society's Show, under the management of the Cheshire B.K.A. Open classes for Hives, Sections, and Extracted Honey. Substantial prizes. Bee Lectures and Demonstrations on the show-ground. Schedules from T. A. Beckett, St. Werburgh's Chambers, Chester. **Entries close August 3 (at double fees to August 10).**

August 24, at Bradford Abbas, Dorset.—Annual Show of the Yetminster and District B.K.A. in the old Vicarage ground. Three open classes, including three 1-lb. jars extracted honey and three 1-lb. sections. Schedules (with entry form) from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne, Dorset. **Entries close August 20.**

August 24 and 25, at Leamington.—Annual Show of the Warwickshire B.K.A. in connection with that of the Warwickshire Agricultural Society. Schedules from James Noble Bower, Hon. Sec., Warwickshire B.K.A., Knowle.

August 25, at Llangollen.—In connection with the Sixth Annual Flower Show. Open classes for Six 1-lb. Sections, Six Jars Extracted Honey, and Beeswax. Schedules from Frank Little, Brook Bank, Llangollen. **Entries close August 11.**

August 25, at Montgomery.—Montgomery and District Horticultural Society. Open classes for honey, six 1-lb. sections and six 1-lb. jars extracted honey. Prizes 10s., 5s., 2s. 6d. Entrance fee 1s. each class. Many open classes, flowers, fruit, vegetables. For schedules, apply Mr. W. Jones, Secretary. **Entries close August 18.**

August 27.—Twelfth Annual Show of the South of Scotland Bee-keepers' Association. Five open classes for extracted and comb-honey and wax. Schedule and entry form from Hon. Sec., S. M'Vie, Essex Park Cottage, Dumfries. **Entries close August 20.**

August 27, at Barnton, Northwich.—In connection with the Barnton Horticultural Society. Six local classes, and classes open to the county, and members of the Cheshire B.K.A. for twelve 1-lb. jars extracted honey, and for 1-lb. beeswax. The C.B.K.A. give their silver medal to winner of first prize for twelve jars of honey. Schedules from Mr. S. Wade, Barnton, Northwich. **Entries close August 20.**

August 30, at Cartmel, Lancashire.—Honey show in connection with the 32nd Annual Show of the Cartmel Agricultural Society. Three open classes for Comb and Extracted Honey (prizes, 15s., 10s., 5s., and 2s. 6d.), and Beeswax (prizes, 10s. and 5s.), along with silver and bronze medals of the Lancs B.K.A. Schedules from W. Cragg, Secretary, Cartmel, viâ Carnforth. **Entries close August 18.**

September 3 to 10 at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders' (12th) Annual Exhibition and Market. Numerous classes and liberal prizes for comb and extracted honey and beeswax. **Open to all British Bee-keepers.** Special

attention is directed to the new **Honey-selling Classes with Free Entry.** Schedules (now ready) from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad-street, London, E C.

Special Notice.—In connection with the above there will be a *Working Exhibit* illustrative of modern Bee-keeping and Honey-production, including *Demonstrations* with *Live Bees* and extracting honey from combs for sale by skilled experts.

September 15, 16, and 17, at Crystal Palace.—Surrey Bee-keepers' Association Annual Exhibition of Bees, Honey, Wax and Appliances, &c. Twenty-five classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, Secretary, Marden House, Redhill, Surrey. **Entries close September 1.**

October 4 to 7, at the Agricultural Hall, London.—Show of Honey and Bee-produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, &c., including the valuable Silver Challenge Cup of the B.B.K.A. Schedules from Mr. Wm. C. Young, Secretary, 12, Hanover-square, London, W. **Entries close September 5.**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

*** The Hon. Sec. of the Cambs and Isle of Ely Bee-keepers' Association request us to notify that the entrance fees in the open classes at the March and Cambridge shows were inserted in the schedule in error, there being no entrance fees for these classes.

M. Medland (Torrington).—Foul-brood Remedies.—The remedies recommended by the B.B.J. are those regularly advertised in its pages, viz., naphthol beta and naphthaline, as supplied from the office with directions for use. We take no responsibility for any others, while not implying anything against the efficacy of other disinfectants, including the one you name.

J. Ripple (Barking).—Improvements in Section-racks.—We cannot judge very well of the value of your section-rack from sketch sent. You had better submit a sample rack to an up-to-date appliance maker and get his views as regards its usefulness or otherwise. The main points of improvement being the use of tin girders and tin angles, we should suggest Mr. W. P. Meadows, Syston, as having exceptional experience in such matters, and consequently well able to judge of its value, if it has any.

J. C. (Twerton-on-Avon).—The B.B.J. and Local Newsagents.—With regard to late delivery of B.B.J. by local newsagents, along with statements about current issues being "out of print," we cannot be held accountable for such statements, by whomsoever made. But they are not correct. Our publishers are supplied with copies on Wednesday afternoon of each week, and they can be had from wholesale London agents, same evening. Not only so, but anyone ordering at Messrs. Smith and Son's railway bookstalls can have copies anywhere in the kingdom at same time as London morning papers. Subscribers' copies are posted on Wednesday.

G. W. Morris (Sheffield).—Bees Transferring Themselves after Swarming.—After sending out a top-swarm from a skep there would be no likelihood of the bees remaining in the latter transferring themselves to a frame-hive the same season. The best plan of getting the bees into a frame-hive would be to drive them from skep twenty-one days after the date of swarming and hive them on combs fitted with full sheets of foundation, just as you would do with a swarm. This will give the best chance of securing a "strong stock" as desired from the bees left in skep.

G. W. B. (Wheaton Aston). — Honey Labels.—We do not know what firms stock labels similar to that shown on page 90 of "Guide Book," but it would cost very little to have a few printed specially by a local printer. Thanks for good wishes, and hope your prospect of a good season will result as wished.

J. Tildesley (Wolverhampton). — Queenless Swarm.—Sample of comb sent has never been bred in at all, the coloured substance in cells being simply fresh-gathered pollen. Your suspicion as regards foul brood is, therefore, wrong. If the other combs in hive are in same condition, it is clear that the swarm is queenless, and this will account for the bees being "very weak" as stated. The advertiser who sold the swarm cannot be blamed, as queen may have been killed in hiving.

A. C. (Essex).—Dead Larvæ Cast Out of Strong Hives. — There is no cause for alarm in the dried and shrivelled remains of a few dead larvæ being cast out as stated. The bees have simply dragged them out when cleaning cells for brood-rearing.

Sussex Downs (Brighton).—As you have found queen and eggs, no doubt your troubles are over. It is not impossible for a hive to throw off casts and leave itself queenless at last, as it depends upon the queen being raised from larvæ not more than three days old. Any over that age would either not produce queens or yield imperfect ones.

QUERCUS (Hanwell).—It is impossible to tell from looking at a few fragments of dead bees flattened and broken into small pieces whether your hive is suffering from foul-brood. If you will send a specimen of brood in the comb, carefully packed so as not to get crushed, we will examine it and report.

EXPERT (Standlake).—The tunnelling you mention is produced by the larva of an insect found in several districts.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul Brood."

In urgent cases (and where possible) we undertake to "wire" replies as to F.B. if six stamps are sent to cover cost of telegram. All letters should be addressed "Editors," not "Manager."

J. W. (Holbeach).—Combs contain several cells of chilled brood. No foul brood present in specimens sent.

J. N. H. (Penarth).—There is foul brood in sample. In the absence of any particulars regarding the bees or hive from which the small piece of partly built-out comb was taken, we assume it is from a straw skep. We can, therefore, do nothing beyond advising you to treat the stock as instructed in "Guide-Book."

R. G. (Grantown-on-Spey).—Sample contains foul brood in the incipient stage; therefore, if all combs affected were in similar condition to specimen sent it would show that the disease was a recent outbreak, but rapidly developing, so you did well to destroy the lot.

"X." (Hants).—Comb is badly affected with foul brood, and altogether offensive to handling as sent.

H. H. K. (Oxon).—The dead larvæ in samples 1, 3, and 4 show no sign of foul brood. On the other hand, the disease is rapidly developing in comb marked No. 2.

J. M. (Boston).—Comb contains several cells of chilled brood.

Honey Samples.

J. G. C. (Oxford).—Your parcel of honey arrived in a horrible condition. The lid of the tin was off, and the tin itself crushed, so that the whole of the contents had to go into a pail of water before we could get at your letter. From what we can see of the honey, it is not very dark, but has a slight flavour of honey-dew. It would do very well for mead. As honey-dew is now so plentiful, you had better remove what light-coloured honey you have before the bees fill up with honey-dew, and so spoil it.

A. T. (Crewe) and "Super" (Yorks).—Samples are spoiled for use as table-honey by a large admixture of honey-dew. They are not only almost black in colour, but the flavour renders the honey only fit for bee-food.

M. A. B. (Cardiff).—All five samples are good; Nos. 1 and 3 very good on all points. Of the remainder No. 2 is best, 4 and 5 being about equal.

*** Several Letters and Queries are unavoidably held over till next week for lack of space.*

Special Prepaid Advertisements.

Twelve words and under; Sixpence; for every additional Three words or under, One Penny

SPECIAL NOTICE.—Orders for three or more consecutive announcements in above are inserted in our monthly, the "Bee-keepers' Record," free of charge.

Trade advertisements of Hive Manufacturers and Dealers in Bee-goods, not available for "Prepaid" column, are inserted immediately below "Prepaid" at a minimum charge of 2s. per half-inch space, or 3s. 6d. per inch; orders for "repeat" or continuous advertisements having free insertion in "Record" as above.

Advertisements for current issue must be received by first post on Tuesday.

HEALTHY DRIVEN BEES FOR SALE, early in August. Swarms, 4s.; Casts, 5s. Boxes 9 l. returnable. Two for 7s. 6d., 9s. Orders executed in rotation. Cash. ARCHER, 64, Kingston-road, Oxford. C 19

LIGHT CLOVER HONEY FOR SALE. £2 16s. cwt. Packed free. COMLEY, Fairford, Glos. C 21

FERTILE QUEENS, first cross British-Italian, in introducing cage, 4s. 6d. Honey Extractor, fitted with extra cages to take sections or standard frames. Condition as new. Packed free 17s. 6d. A. CHEETHAM, Chislehurst, Kent. C 22

3 STOCKS, Straw Skeps, 16s. each. 3 Early Swarms out of same, 12s. 6d. Free rail. BROWN, Withington, Shrewsbury. C 23

DRIVEN BEES, delivery to August 20th, 4s. per lot. After this date, 3s. 6d. Orders cash. Delivered rotation. Boxes returnable. Order early. T. PULLEN, Ramsbury. Hungerford. C 25

FOR SALE, "LITTLE WONDER" EXTRACTOR. 6s. A. SMITH, 48, Broad-street, Hereford. C 26

SIMMINS' QUEENS are reared and mated by a new process of selection, which ensures heavy yields. Queen-rearing a speciality since 1875. Safe introduction guaranteed for nearly 20 years. Address BROOMHAM, Heathfield, Sussex.

IMPORTED ITALIAN QUEENS, 6s. each, in introducing cages. Safe arrival guaranteed. E. WOODHAM, Clavering, Essex. C 28

ORDERS for DRIVEN BEES, commencing August, now being booked. 1-3 lb. Boxes, 2s., returnable. Safe delivery in rotation. DAVIDSON, Expert, Beecroft, Basingstoke. C 27

WANTED, for a country house in Berks, a qualified CARPENTER, with a thorough knowledge of beekeeping, to carry out sundry carpentry work and to assist in enlarging and superintending an apiary. Apply by letter, stating age, qualification, and wages required. No board or lodging provided. Address E. G., Queen Anne's Mansions, London, S.W. C 26

12 VERY STRONG STOCKS, in bar-frame hives, guaranteed healthy, £20. SIGGERS, Great Dunham, Norfolk. C 15

10-ROOMED HOUSE, with large garden and orchard, suitable for bee farm or fowls, FOR SALE. A. BAGLEY, 6, High-street, Brightlingsea. C 14

10 SUPERS, with clean, healthy, shallow combs, 7s. 6d. each. BUTTERY, Forge Apiary, Wheaton Aston, Stafford, C 16

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

The monthly meeting of the Council was held at 105, Jermyn Street, London, S.W., on Wednesday, July 20, Mr. T. W. Cowan occupying the chair. There were also present, Rev. W. E. Burkitt, Major Fair, Messrs. D. W. Bishop Ackerman, W. Broughton Carr, J. B. Lamb, W. Woodley, T. I. Weston, and the Secretary.

Letters apologising for compulsory absence were read from Miss Gayton, Messrs. T. Bevan, W. H. Harris, W. F. Reid, Wm. Richards, E. D. Till, and F. B. White.

The minutes of the previous meeting were read and confirmed.

The following new members were elected, viz. :—The Lady Warwick College, Studley (represented by Miss B. M. La Mothe); Major R. H. Kirkwood, Boldrewood, Mortimer, R.S.O., Berks; Mr. Arthur Lorraine, Victoria Villa, Clifton, York; Mr. George May, Oakgates, Caterham-on-the-Hill, Surrey; Rev. T. S. Shaw, Bedingfeld Rectory, Eye, Suffolk; Mr. William H. Turner, Moons Cottage, Ashingdon, near Rochford, Essex; Mrs. Whiting, Chediston, Halesworth; Mrs. B. J. E. Wright, Fairleigh, Overton, Ellesmere.

The Finance Committee's Report, as presented by Mr. T. I. Weston, gave particulars of receipts and expenditure to date, and was duly approved.

Reports of examiners of candidates for third-class expert certificates at Whitehaven and Penrith, Market Rasen and Park Royal were received, and in accordance with the recommendations of the examiners, it was resolved to grant passes to Messrs. G. W. Avory, D. Bouch, H. Lindley, J. Nicholson, W. Paris, J. Smallwood, and Charles Waghorn.

Judges and examiners were appointed to officiate at fixtures in Berkshire, Cheshire, Norfolk, Somerset, Warwickshire, Wiltshire, Devonshire, and Worcestershire.

The Secretary gave a report upon the recent demonstration at the Show of the Royal Botanic Society in Regent's Park on July 24, and also stated that in an interview with the President (the Baroness Burdett-Coutts) her ladyship had been good enough to promise a donation of £20 towards the expenses of exhibitions during the current year.

It was resolved to ask Mr. W. F. Reid to kindly represent the B.B.K.A. at the Congress of Beekeepers, to be held at the forthcoming St. Louis Exhibition.

The following circular letter, addressed to Secretaries of County Associations, was read, together with replies from ten societies, also several letters from individual beekeepers on the subject of legislation for the prevention of foul brood. In view of the fact that a number of Associations are shortly holding meetings to deal with the matter, it was decided to await the results of such gatherings, and the decision of the proposed conference before any action can be taken.

"Dear Sir,—With reference to the question of agitation for an 'Act for the Better Prevention of Foul Brood,' the Council of the British Bee-Keepers' Association are anxious to ascertain through the County Associations, to what extent the societies and bee-keepers generally are in favour of renewed efforts to obtain Parliamentary powers to deal with the disease. To this end will you kindly let me know :—(1) If your Association is, or is not, in favour of legislation; (2) Will your County Council support, or put in force, an Act, if obtained? (3) Is your Association prepared to contribute toward the cost of securing a Bill, and if so, what sum?

The Council will be obliged if you will take such steps as may be necessary to enable you to reply to the enquiry, and if your Association will arrange to send two representatives to a Conference to be held in London on Thursday, October 6th, 1904, to fully discuss the matter, and to decide upon the action to be taken to carry out the wishes of the majority.

Thanking you in anticipation of your reply, Yours faithfully,

Edwin H. Young, Sec."

The next meeting was fixed for Wednesday, September 21.

INSURANCE FOR BEE-KEEPERS.

We have received the following letter from the Vice-chairman of the B.B.K.A. for publication :—

Dear Messrs. Editors,—As the second policy of our insurance scheme is now within a few days of expiry, it may interest your many readers to know how it has fared. I have much pleasure in telling them that there has been a substantial increase, as shown by the following figures :—1902-3—Insurers, 636; hives, 7,342; percentage, 11.54 per insurer. 1903-4—Insurers, 822; hives, 9,586; percentage, 11.66 per insurer. Increases—Insurers, 186; hives, 2,244. Renewals for 1904-5 will be due on and after August 1. I trust I may have to report in a year's time a further satisfactory increase.—I am, yours faithfully,

Thomas I. Weston,
Vice-chairman, B.B.K.A.

Hook, Winchfield, July 23, 1904.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "THE EDITORS of the 'British Bee Journal,' 10, *Buckingham-street, Strand, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 10, *Buckingham-street, Strand, London, W.C.*"

NOTES BY THE WAY.

[5590.] The drought still continues, vegetation is parched, nay, scorched, up, and the bee-forage very much curtailed, compared to what it would have been had two or three good downfalls of rain occurred at intervals of a week. In many places the lime trees are infested with blight, and the aphidian conglomeration called honeydew, which the bees have gathered, has almost spoiled the crop of the latter ingathering and much reduced the value of the crop; in some instances rendering it unsaleable as honey at any price.

I am thankful to say the limes in our hamlet are fairly free from aphis, but three miles away the trees are reeking with honeydew.

Foul Brood Legislation.—This subject again occupies the minds of bee-keepers, who evidently differ very much in opinion as to the desirability or otherwise of compulsory powers for dealing with it. These differences exist among those who have the welfare of bee-keeping at heart equally with those who are loudest in their demand for the foul brood inspectors armed with compulsory powers. I do not find anything in the draft of the Bill dealing with bees located in hollow trees, walls, and roofs of houses or churches. Nor is there any clause to suppress the manufacture or sale of comb-foundation, and its future use till we are guaranteed that every germ has been rendered sterile before the wax has been impressed by the machine. So far as I know, we have one only among our foundation manufacturers who sterilises his wax-foundation. Then, we have no clause to prevent the introduction of the disease from abroad by the purchase of foreign queen bees. These are possible sources of infection (*vide* former volume of B.J., where Mr. Martin, of High Wycombe, states he never had foul brood until he introduced Ligurian queens into his apiary), nor any means of preventing the sale of bees by auctioneers at public auction without a guarantee of their healthiness. This latter method of distributing an apiary (if diseased) would—and has—spread the disease far and wide, as has also the sale of used hives in which bees may have died of disease years before. From direct information I have received since my last "Notes" appeared on page 271, even the bee-keepers of Cumberland are by no means unanimous in their desire for legislation. One correspondent writes that in his district the membership of the Association has been reduced from ten to two, owing entirely to the introduction of this debatable subject. Possibly I am one of the offenders our friend "D. M. M." refers to on page 282 last week, as throwing cold water on the effort. But, suppose we take first cost of the "Bill." Why, we shall want another £500 to get the Bill through the House of Commons, and in the present congested state of the Legislature there is not, in my opinion, the ghost of a chance of its introduction this Session. These, I opine, are the chief reasons why the Council of the B.B.K.A, after their previous experience, have not espoused the cause—and in the interval, I consider it desirable that every bee-keeper should give his or her opinion for and against the Bill. The liberty of the subject is certainly well worth a fight. But has our friend given any thought to the ability or competence of the "inspectors" to be appointed under the Bill? What guarantee shall we have that they are competent to carry out their duties? How long will their appointment last—annually or for life? Again, would their authority give them power to walk into an apiary, say towards the end of May or early in June, and overhaul, examine, and dismantle the whole apiary of say (in my case) some two hundred hives? If not, how would the inspector know that the apiary was free from any trace of the disease except he critically overhauled every colony and thoroughly examined every comb of brood in each hive? This interference with my individual rights would certainly be resented on my part, and unless I was awarded compensation for the loss of my own time—as I should not leave "the other fellow" to his devices without keeping an eye on his movements, and the loss to my apiary of bees caused by the interference of the inspector—well, Messrs. Editors, to use a vulgarism, there would be "ructions"!

Bees After Water.—I may add I have known when a good flow of honey has been on that bees have neglected the water and even the carrying of the honey nectar into their hives. I have had it stored in empty combs left outside the hives in the apiary so that under certain conditions of the season my reply to "H. O. F." was quite

within the bounds of probability and credence.—W. WOODLEY, Beedon, Newbury.

[With reference to the cost of getting a Bill through the House of Commons, we must not forget that Mr. Saunders' contention is that the Bill would be passed as a Government measure, and, consequently, at no cost to bee-keepers. For ourselves, we have not much hope that this will be done; but apart from that there would be considerable expense incurred, certainly not less than £150, in the preliminary work—in view of the opposition sure to be met with—which must fall upon Bee-keepers' Associations.—EDS.]

FOUL BROOD LEGISLATION.

[5591.] I have read with interest the articles in B.B.J. on foul brood legislation, especially those protesting against it. I cannot myself see that the protesters have used any arguments to which we can attach any weight, or given an alternate scheme that is any good. Speaking for myself, I am certainly not in a "panic" to get compulsory powers, but something is needed, and as already said, there does not appear to be any other scheme. Mr. Farmer certainly gives a very good list of precautions in his letter (5577, page 272), but fails to say how he would get them carried out without compulsory powers. He says "if all beekeepers observe them." That is just the point. I think I may say the majority of beekeepers will *not* observe them voluntarily. Compulsion may be an ugly word to some people, especially those who prefer to follow their own plan, which generally is to do as little as possible for the bees, and often to leave hives and combs, in which bees have died of disease, for other bees to clear out, or a strong swarm to occupy, even if the bee-keeper himself does not put in another swarm on to the old combs, to go the way of the previous stock, or else he simply empties the whole contents of the hives in the open, and leaves them exposed. As for some people giving up bees, rather than submit to a compulsory examination, all I have to say is that the sooner a great many apiaries I have seen are given up and the contents burned the better for intelligent and painstaking bee-keepers in the vicinity, and they will be no loss to the B.K.A. either. May I also inquire where is the "rush after an Act of Parliament in a panic," in face of the fact that legislation was sought eight years ago by the B.B.K.A., and the matter has been simmering ever since. I think if any one would go on an expert tour he would have no doubt as to the prevalence of foul brood. I should like, as another expert, to endorse Mr. Waddell's remarks (5566, page 263), and add that none but those who have done the work have any idea of the discouraging and depressing effect on one's spirits when hive after hive, for days at a stretch sometimes, discloses more or less marked symptoms of foul brood.—J. HERROD, Trentside Apiary, Sutton-on-Trent, Newark, July 18.

[5592.] With regard to this foul brood question, may I say, as foul brood exists in this county, I should refuse to allow any visiting expert to pull my bees about (being an expert myself), but I would permit any expert to examine them if there is real cause for doubting their condition. This is a right any bee-keeper should have. I favour compulsory examination where there is a good case for it, but I do not see why our association should ask County Councils if they would enforce it if we had a Foul Brood Act. In the B.B.J. (page 230) appears a reply to "Anxious, Derby," reporting foul brood. I think my neighbours and I ought to know where this case is located, and let us help "Anxious, Derby," to put it down. Personally, I should only be too pleased to do so.—J. PEARMAN, Derby, July 16.

[As the County Councils are the only bodies who would have power to enforce the Act—if obtained—it follows that their co-operation must be secured in order to make it of any use.—EDS.]

THE FOUL-BROOD QUESTION.

[5593.] I was once like Mr. Farmer and "A Devon Bee-keeper" in my opinion of foul brood, but I had a rude awakening. About twenty-five years ago I began bee-keeping in one of the best honey-producing districts in England, where stocks were to be seen in cottagers' gardens by the dozen, and where disease was unknown. About fifteen years ago it came with a vengeance, and no man knew whence it came. In a year or two there was scarcely one healthy stock within a radius of several miles, while diseased ones were to be found by the score. Some of your correspondents are, I fancy, living in districts which have not been seriously attacked—if at all—by the scourge. I am wondering how they would keep it at bay if within half a mile of them there were twenty or thirty empty hives with combs in—excuse the bull—all diseased. If they had seen, as I have, an apiary of sixty odd stocks go nearly rotten all round within a few weeks; if they had melted down every comb they had—brood, store, and section—and replaced by foundation a time or two; burnt every frame and quilt; burnt out with petroleum every

hive: if they had bought for several seasons running over fifty driven stocks to place on clean foundation, and then after all found that the disease reappeared—would they still say no legislation was needed? I think not.

My experience—and it is not a small one, as I was expert for several years for one division—is that if an apiary is healthy its owner is generally pleased to show it, but I often found that where disease was known or suspected to exist stocks were often jealously guarded. I call to mind that in one garden I saw above a dozen combs, all diseased, thrown out on the ground for the bees to clear out. Several of them when thrown out were fairly full of honey. That was spreading foul-brood and I thought at the time deserved legislating upon.

I quite agree with 1. and 2. of Mr. Farmer's preventive precautions, but 3. I cannot see; it might do as a curative, but as a preventive, where is the necessity for all brood combs to be renewed or disinfected? What about the brood therein? The 4th will do; 5th is doubtful, for in my experience all queens will not last four years; 6. and 7. are all right, but there is a weak spot in his 8th for without some supervision—Government or otherwise—how are we to know that any other district is healthy? I do not think that there is much fear of in-breeding generally, for it is an acknowledged fact that queens do not mate at home. In my opinion it is safest to breed and use your own queens if your stocks are healthy.

I agree, Mr. Editor, with your footnote to Mr. Farmer's letter last week, for it was in May and early June that the apiary I mention above was so badly attacked. If Mr. Farmer had suggested mid-June he would have been nearer the mark, I think. After then the disease begins to disappear, as a rule, for the season, unless a very bad case.—NONDESCRIPT, Northumberland.

BEES IN "WELLS" HIVES.

INTERCOMMUNICATION BETWEEN BEES.

[5594.]—May I impress on your correspondent, "Probationer"—who writes on page 285—the need for caution in allowing bees to mingle in "Wells" hives. Your reply to him already suggests this, but a further word of caution will do no harm. Bees should be at least a full fortnight in their separate compartments before they are allowed to intercommunicate, otherwise they will make disastrous war on each other. He will also do well to examine the partition-board to see that no bees can pass from one side to the other. The queen already lost may have disappeared through this cause.

Foul Brood Debate.—Can we not have a little less acrimony, and consider this matter on practical lines alone? Those who differ from us may not be "cranks" any more than we are ourselves, and may be just as earnest to arrive at a right decision as we are. No one will dispute the vast importance of the subject, and to pass a measure in haste that might press very hardly on all bee-keepers would be a great calamity. If we are to have a Foul Brood Bill, let it be a workable moderate one, with no legal right to upset healthy apiaries at unseasonable times. I am no curmudgeon, and an expert or any other person is always welcome on a friendly visit, but it would, as I have said, be most irritating to have to pull off my crowded supers for a compulsory legal examination. I would urge upon all lecturers the necessity of impressing strongly on all those whom they seek to make into bee-keepers the fact that bees cannot be kept without personal labour and attention. I am always willing to lend a hand to an enthusiastic learner, but I find some who are not enthusiastic, who take up bee-keeping thinking to make a fortune without effort, and who never make any headway at all afterwards. These are they who are a danger to the careful, and a little more enlargement on the difficulties of bee-keeping might do something to keep away these undesirable recruits. Those of my critics who think I am not qualified to debate on foul brood, because I have never experienced it, are surely illogical. Which is best? To keep it away or to cure it? We have foul brood in Truro. This is my third season in Truro, and I have escaped yet. I scarcely hope to escape always, but I neglect no precaution to avoid it.—W. J. FARMER, Truro, July 24.

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

The Rev. Mr. Lamb, whose apiary, along with himself, is illustrated on next page, is well known to readers of the B.B.J. as a contributor to its pages who has the courage of his convictions in matters relating to bee-keeping. This is shown in the many interesting letters dated from Burton Pidsea in which his "convictions" are expressed, and with which readers are familiar. We need, therefore, add nothing to the following "notes," in which the story of his apiary is pleasantly told. He says:—

"I have pleasure in sending you, with a view of my present apiary, an account of its 'ups and downs.' The picture cuts off a row of hives on the left, facing the one I am manipulating; otherwise, three squares would have been seen, containing about 50 colonies. The building is my

workshop, beyond which, under the trees, there is room for two dozen more stocks. Swarms are generally placed there to work sections; all these are taken in August to Whitby moors for the heather, and on their return are located in front of the hut.

"My interest in apiculture began at Normanton in the summer of 1874 after reading a pamphlet on bee-keeping, and I was fortunate in having the late John Hunter's trustworthy 'Manual of Bee-keeping' to guide me into the first principles. After reading the chapter on 'driving,' I successfully drove two condemned stocks of a cottager who had kept bees for twenty years. She was surprised that I came to tackle them at noon, and more so when she heard that I had never handled bees before. Soon after I drove two skeps belonging to another neighbour, but in trying to unite them I drowned both lots by too strong a dose of scented syrup. It was a sad but valuable lesson; but I felt thankful I had not learnt it by a much greater sacrifice in the spring. During the winter I read the above manual half a dozen times and had two frame-hives made. In the spring of 1875 a fair start was made with three colonies, as the driven lots had survived all the winter, and I purchased another splendid stock in skep for a guinea.

"The results of the first season were eight guineas from honey sold at a bazaar and three swarms, but in those days the price was 1s. 6d. to 1s. 8d. per lb.

"Speaking generally, I may say I have kept and studied bees for thirty years, during which they have afforded me both pleasure and profit. For twenty years I have tried to build up a model apiary, but am still a good deal below my ideal. For one thing, as the hives have been added from time to time, they are of too many shapes and sizes, though all take the standard frame. In the eighties I adopted a combination hive (i.e., a straw hoop for brood-chamber, carrying a frame for supering), but in order to combat foul-brood they were put aside for frame-hives. I have since kept the disease at bay by frequently renewing the combs.

REV. R. M. LAMB'S APIARY, BURTON PIDSEA, YORKSHIRE.

"As regards supers a store of worked-out shallow frames is my sheet-anchor. I have paid some attention to the production of comb-honey. Being disappointed with the ordinary square 2 in. section, I tried to raise extra thick combs in shallow-frames. These I greatly admire. But our short uncertain seasons compelled me to give them up and to turn my thoughts to a thinner section. The size I advocate for commercial purposes is $4\frac{1}{2}$ in. by 5 in. by $1\frac{1}{2}$ in. with a bee-way to be worked with 'fence' separator. For rapid and good work they should be hung in the middle of a shallow-frame box. I am glad to notice that several dealers are stocking them for

this season. Referring to the question of glass honey-jars, the other day I came across an article of mine in B.B.J., in which screw-capped jars were compared with "globes." I take no credit to myself for having adopted the latter. Feeling that the middleman should have a say as regards the receptacle, I submited a few samples of jars to a large dealer in honey. He fortunately selected the 'globes.' The public like it, and I have reason to be perfectly satisfied. By using them instead of the 17 or 18 oz. screw-caps, I consider I have saved during fifteen years about £100.

"With respect to forage my bees are fairly well off, as plenty of white clover is raised in this district for feeding sheep. But I give nearly half my apiary a second innings in August on the Whitby moors. This I have been able to do with greater comfort since I prevailed on the railway companies to convey a truckload of bees by passenger train at 6d. per mile.

"Now, having perhaps written too much I must hasten to wind up. Such splendid strides have been made in our fascinating pursuit during the last generation that I feel it has been a great privilege to have studied it during this period. With the successive invention and improvement of frames and sections, foundations and extractors, queen-excluder and super-clearers, etc., we seem to have passed from darkness to light, and how many hundreds from all parts of the world have contributed to our present knowledge! I thank them all heartily. I have also specially valued the work of shows and associations. Many a useful wrinkle, saving time and labour, has been gleaned at their meetings. And last, but not least, thanks are due to our Editors for carefully handing the torch from one to another in the excellent bee-papers which have afforded me untold interest and instruction. May their influence continue to extend far and wide."

Queries and Replies.

[3499.] *Transferring Bees.*—Would you be good enough to advise me in the following case? One of my hives has very old and badly-built comb, which I want to get rid of. I put on a super early in May; a swarm issued June 1, and a cast June 12. The latter I returned after placing the hive on a new brood chamber having ten frames of foundation. The super had not been touched, so I took it away. As the bees have not yet attempted to draw out the new frames, I am wondering if I ought to lift off the old hive, brush the bees down into the new chamber, and replace the old with a sheet of excluder zinc between. Awaiting your kind reply in B.B.J.—J. STANHOPE, Hants, July 18.

REPLY.—Your best plan now is to place any of the old combs containing brood in the centre of new hive, and give frames of comb foundation sufficient for the bees to cluster upon. The bees can then be shaken or brushed off the combs into the lower hive. The old frames can be removed later when brood-rearing ceases, and the space reduced by a division-board leaving only sufficient frames for the bees to crowd upon.

[3500.] *Bees Leaving Supers.*—I notice in B.B.J. for July 14, in reply to query 3487, you state that it is too late to give frames of foundation for building out. I have had a rack of shallow-frames fitted with full sheets of foundation over a swarm which I hived on June 10, for about a fortnight. On the evening of July 9, on looking in I found the frames covered with bees, and also on the following day, but since then there are only a few stray bees on frames, and they have not started to draw them out. Will you kindly advise me, should I leave them as they are? I particularly want some extracted honey, and I have depended on this hive for it. The others have sections on. Being quite a beginner I am puzzled, and am sure you will help me out of my difficulty, as you so kindly did last year. Thanking you in anticipation.—A LADY BEE-KEEPER, Harpenden, July 17.

REPLY.—No doubt your bees are occupying the brood-chamber, and have left the supers because they find all the room they need below. It is too much to expect surplus from a swarm hived so late in the season as June 10. In many districts the honey harvests are now over, and only where lime-trees are in bloom is any appreciable quantity of honey to be expected until the heather is in bloom.

[3501.] *Bees Not Filling Sections.*—I should be obliged if you would kindly answer the following:—1. Do you think it would be safe to remove the queen-excluder now, or would not the queen possibly lay in the sections if this was done? Last year an expert who saw my bees about this time of year took the excluder off with good results; but I find the bees are not making much headway, although a strong colony. In consequence, did not like to take away any of the ten frames now in the hive, as they were so full of brood. 2. Do you think I should re-queen this hive next year? This is the second year to my knowledge the stock has not sent out a swarm during the whole time. 3. I bought a swarm early in June and put on sections in another hive about a fortnight ago, but the bees are not up in either case, but both hives have an ex-

cluder on. Why is this? Any advice will be gratefully received. I fear I shall not get much honey this year, although I did fairly well in 1903.—G. L., Weybridge, July 20.

REPLY.—1. If there is plenty of room in brood-nest it is not very probable that the queen would pass up into sections at this season; consequently no harm would result from removing queen-excluder; but you must not assume that the sections now on will be filled. The honey-gathering season of last year continued far later in the autumn than it seems likely to do this time and with the end of July very little can be expected in the way of completing unfinished sections. 2. Not if the queen now heading the colony is doing well, as stated. It is not safe to reckon a queen's age by the swarming test, because the bees not seldom depose queens and raise new ones unknown to their owners. 3. The refusal to enter sections is most frequently explainable by the scarcity of honey while they are on.

[3502.] *Giving Surplus Room to Swarms.*—On June 7 I received a swarm in a skep, when I put them into a frame-hive. The bees were then fed with medicated syrup for a fortnight, giving about half-a-pint each evening. At the end of that time I removed the syrup bottle and put on a rack of sections; but the bees have not gone up into the super. Now I notice that in answer to an inquirer in B.B.J. of June 30 (3474, page 257) you say the super "should have been put on when the bees were hived." For my future guidance, please tell me if I should have done right to have put on the newly-hived bees a rack of sections, and then put the feeding bottle of naphthol-beta syrup on the top of the sections? I send name and adress for reference and sign—MEL ROSÆ, Yarmouth, July 22.

REPLY.—The two cases are different; seeing that the swarm mentioned on page 257 was a "very large" natural swarm and hived at home in mid-May, whereas yours was received on June 7, and may have been a small one (or maybe an artificial swarm) from a distance. It would never have done for you to give a rack of sections and start feeding the bees while sections were on. On the other hand, it is good practice to crowd a large swarm to six or seven frames, and give sections at once if honey is coming in well.

[3503.] *Uniting Bees for the Heather.*—I should feel obliged for an answer to the following:—1. I had a second swarm or "cast" on June 17, which was hived on five frames of foundation, all of which are now built out and filled with sealed brood. Another hive sent out a top swarm on June 30. The queen was in her third season. I hived this lot on six frames of foundation, and the combs are drawn out, some being well filled with brood. I would like to unite the two lots for the heather, and so ask, how long should the old queen be killed before uniting? 2. I had my first swarm on June 3. It was a very good one, the bees covering eight frames when hived. A few days later I inserted the other two frames to complete the full number, and also put on a super. But the bees swarmed again on July 17 (a 5 lb. swarm), and I would be glad to know whether it was the first queen or a virgin that came off with the swarm? I only started bee-keeping in 1901, and have not had a similar experience before. I send name and address and sign—CAMPSIE.

REPLY.—1. We should destroy the old queen when uniting the two lots. 2. A swarm that issues as stated is usually called a "virgin swarm," and is headed by the original queen or mother-bee.

[3504.] *Alleged Feeding Bees with Treacle.*—I should be obliged if you would tell me what remedy I have in the following circumstances:—My honey this year happens to be rather darker than usual, and consequently I am accused of feeding my bees with treacle, or, if not treacle, that the honey is last year's. Both these statements are absolutely false. As a matter of fact, I ask: Would it be possible to obtain honey by feeding bees with treacle? I enclose my card, and sign—ANNOYED, Worthing.

REPLY.—Honey is the nectar gathered from flowers, therefore it is perfectly safe to say it cannot be got by feeding bees with treacle, the latter being the molasses removed from cane sugar in the process of refining. On the other hand, we cannot quite say what "remedy" you have against any one making a false statement beyond proving it to be untrue.

[3505.] *Preventing After-Swarms.*—In order to check issue of after-swarms, I, on hearing queen "piping," cut out all the queen-cells, and ask:—1. Do you think above a reliable plan? If not, why not? 2. The queen in one of my colonies proved a drone-breeder. I removed her and joined the bees to another stock. I noticed on examining the combs a few cells of last year's brood in several of the frames, and on removing the capping found in every case a perfectly formed bee, ready to emerge—dead, of course. Do you consider it safe to use these frames again?—J. A. C., N.B.

REPLY.—1. The reliability or otherwise of the plan followed largely depends on the queen heard piping having emerged from the cell; because the peculiar sound known as "piping" is often heard before

the queens actually leave the cell. On the other hand, second swarms will sometimes issue notwithstanding removal of surplus queen-cells. 2. It will be quite safe to use frames of comb if all sealed brood is in same state as that noted.

[3506.] *Ridding Hives of Superfluous Drones.*—Thanking you for answer to a former query, I am again troubling you with the following:—1. One of my hives seems to contain an uncommon number of drones, compared with the other colonies, and in order to remove these unnecessary feeders I have been killing a good many of them off. Have I done right, or otherwise? 2. Another hive has been throwing out quite a quantity of what I send you a small sample of. Can you give me any information as to what it is, or why it should be there? Your replies will much oblige. I send name, etc., and sign—NOVICE, Bridge of Allan, July 21.

REPLY.—Under the circumstances you have done right, but the best way of ridding your hive of superfluous drones is to remove the frames containing drone-comb and replace them with others filled with worker-cells. A few scores of drone-cells are enough for all hives. 2. The "fluffy" substance sent is the remains of some woollen material used as quilts or coverings which the bees, at infinite labour to themselves, are endeavouring to remove from the hive piecemeal.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

July 29, 30, and August 1 and 2, at Southport.—Annual Show of the Royal Lancashire Agricultural Society. Liberal money prizes are offered for honey along with silver and bronze medals of the B.K.A. and also of the Society. **Entries closed.**

August 1 (Bank Holiday), Windsor District, Berks B.K.A.—Annual Show of Honey and Bee-Appliances in conjunction with the Clewer Horticultural Society, in the grounds of Clewer Manor (by permission of E. B. Foster, Esq., J.P., C.C.). **Entries closed.**

August 1 (Bank Holiday), at Cambridge.—Honey Show of the Cambs. and Isle of Ely B.K.A. Eleven classes with good prizes, including one for "Display of Honey," prizes 30s., 20s. and 10s. Also open gift classes for single section and single 1-lb. jar extracted honey. Schedules from G. E. Rogers, Hon. Sec., "Bceholm," Newnham, Cambridge.

August 1 (Bank Holiday), at Andover.—Show of the Andover and District B.K.A. in connection with that of the Horticultural Society. **Entries closed.**

August 1 (Bank Holiday), at Melton Constable Park.—Annual Show of the North Norfolk B.K.A. **Entries closed.**

August 2, 3, and 4, at Dudley.—Annual Show o fthe Dudley Horticultural Society. "Gift class."—The honey section includes a single 1-lb. jar extracted honey, first prize 20s.; second, 10s.; third, 5s. Schedules from Howard Dickinson, F.R.H.S., Horticultural Society, Dudley. **Entries close July 29.**

August 3 to 5, at Huddersfield.—Show of Honey, &c., in connection with the Royal Yorkshire Agricultural Society. **Entries closed.**

August 4, at Kingsthorpe, Northants.—Honey Show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar of honey. (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Hon. Sec., Kingsthorpe, Northampton. **Entries close August 1.**

August 4, at Madresfield.—Worcestershire B.K.A. Annual Show of Honey and Appliances in connection with the Madresfield Agricultural Show. Open classes for (1) Stock of Bees in Observatory Hive; (2) For complete Frame-Hive; (7) For 6-lb. Jars of Extracted Honey. Schedules from George Cook, Bastonford House, Powick, Worcester. **Entries close July 30.**

August 10, at Wye.—Kent Honey Show.—Several classes for Extracted and Comb Honey, Trophy, Wax, Mead, Cakes, &c., &c. Liberal cash prizes and silver medals. Open Classes for Single 1-lb Jar Extracted Honey (Light); Ditto (Dark); Single 1-lb. Section, with prizes of 20s., 10s., and 5s. in each class. Bee Demonstrations, Horticultural Show, Cycle Sports, &c. Schedules from J. Tippen, Secretary, Wye, Ashford, Kent. **Entries close August 5.**

August 11, at Bath.—Annual Show of the Bristol, Somerset, and South Glos. B.K.A. Seven open classes for honey, &c. Cash prizes to value of £8 11s. Schedules from Mr. J. W. Brewer, 26, Lambridge-place, Bath. **Entries close August 3.**

August 11, at Goole.—Annual Show in connection with the Goole Horticultural and Agricultural Society. Six open classes, including separate classes for light and dark extracted honey. Good prizes and low entry-fee (viz., 6d.). For schedules, apply to Secretaries, J. Liddington and H. S. White, Lindum House, Goole. **Entries close August 6.**

August 13, at Lancaster.—Show of Honey, &c., in connection with the Lancaster Agricultural Society's Annual Show. Open classes for six 1-lb. sections; six 1-lb. jars extracted honey (light); six 1-lb. jars extracted honey (dark); and beeswax. Local class for three shallow frames. Lancs. B.K.A. silver and bronze medals and other specials. Schedules from Thos. Armitstead & Son, Lancaster. **Entries close August 4.**

August 13, at Burry Port.—Honey Show in connection with the Burry Port Horticultural Society, South Wales. Six open classes, including one for single 1-lb. jar extracted honey, with free entry. First prize, 12s 6d.: second, 7s. 6d.; third, 4s.; fourth, 2s. **Entries close August 9.**

August 17, at Radstock, Bath.—Honey Show in connection with the Radstock and District Horticultural Association. Open classes, three prizes in each, for six 1-lb. sections; six 1-lb. jars extracted honey, and two shallow-frames for extracting. Members class for single 1-lb. jar extracted honey. Schedules from B. M. Clark, Sec., Fox Hill, Radstock. **Entries close August 10.**

August 17 and 18, in "The Quarry," Shrewsbury.—Annual Show of the Shropshire B.K.A. in connection with the Shrewsbury Great Floral Fête. Eight open classes for Honey. Entry free for 1-lb. Jar and 1-lb. Section. Schedules from S. Cartwright, Hon. Sec., Shawbury, Shrewsbury. **Entries close August 5.**

August 24, at Fleetwood.—Honey Show in connection with Fleetwood Floral and Horticultural Society. Open classes for Six 1-lb. Sections. Six 1-lb. Jars Light Extracted Honey, and Six 1-lb. Jars Dark Extracted Honey. Schedules from Edward Cook, Hon. Sec., Rossall Grange Farm, Fleetwood. **Entries close August 14.**

August 24, at Sandbach.—Honey Department of the Cheshire Agricultural Society's Show, under the management of the Cheshire B.K.A. Open classes for Hives, Sections, and Extracted Honey. Substantial prizes. Bee Lectures and Demonstrations on the show-ground Schedules from T. A. Beckett, St. Werburgh's Chambers, Chester. **Entries close August 3 (at double fees to August 10).**

August 24, at Bradford Abbas, Dorset.—Annual Show of the Yetminster and District B.K.A. in the old Vicarage ground. Three open classes, including three 1-lb. jars extracted honey and three 1-lb. sections. Schedules (with entry form) from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne, Dorset. **Entries close August 20.**

August 24, at Reading.—Honey Show of the Berks B.K.A., in conjunction with the Annual Exhibition of the Reading Horticultural Society. Open classes for comb honey in sections and for extracted honey. Local classes include prizes of 20s., 15s., 10s., and 5s. for honey trophy. Also classes for owners of small apiaries. Schedules from D. W. Bishop-Ackerman, Hon. Sec. Berks B.K.A., 131, King's-road, Reading. **Entries close August 21.**

August 24 and 25, at Leamington.—Annual Show of the Warwickshire B.K.A. in connection with that of the Warwickshire Agricultural Society. Schedules from James Noble Bower, Hon. Sec., Warwickshire B.K.A., Knowle.

August 25, at Llangollen.—In connection with the Sixth Annual Flower Show. Open classes for Six 1-lb. Sections, Six Jars Extracted Honey, and Beeswax. Schedules from Frank Little, Brook Bank, Llangollen. **Entries close August 11.**

August 25, at Montgomery.—Montgomery and District Horticultural Society. Open classes for honey, six 1-lb. sections and six 1-lb. jars extracted honey. Prizes 10s., 5s., 2s. 6d. Entrance fee 1s. each class. Many open classes, flowers, fruit, vegetables. For schedules, apply Mr. W. Jones, Secretary. **Entries close August 18.**

August 27.—Twelfth Annual Show of the South of Scotland Bee-keepers' Association. Five open classes for extracted and comb-honey and wax. Schedule and entry form from Hon. Sec., S. M'Vie, Essex Park Cottage, Dumfries. **Entries close August 20.**

August 27, at Barnton, Northwich.—In connection with the Barnton Horticultural Society. Six local classes, and classes open to the county, and members of the Cheshire B.K.A. for twelve 1-lb. jars extracted honey, and for 1-lb. beeswax. The C.B.K.A. give their silver medal to winner of first prize for twelve jars of honey. Schedules from Mr. S. Wade, Barnton, Northwich. **Entries close August 20.**

August 30, at Cartmel, Lancashire.—Honey show in connection with the 32nd Annual Show of the Cartmel Agricultural Society. Three open classes for Comb and Extracted Honey (prizes, 15s., 10s., 5s., and 2s. 6d.), and Beeswax (prizes, 10s. and 5s.), along with silver and bronze medals of the Lancs B.K.A. Schedules from W. Cragg, Secretary, Cartmel, viâ Carnforth. **Entries close August 18.**

September 3 to 10 at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders' (12th) Annual Exhibition and Market. Numerous classes and liberal prizes for comb and extracted honey and beeswax. **Open to all British Bee-keepers.** Special attention is directed to the new **Honey-selling Classes with Free Entry.** Schedules (now ready) from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad-street, London, E.C.

Special Notice.—In connection with the above there will be a *Working Exhibit* illustrative of modern Bee-keeping and Honey-production, including *Demonstrations* with *Live Bees* and extracting honey from combs for sale by skilled experts.

September 14 and 15, in Waverley Market, Edinburgh.—Eleventh Exhibition of the Midlothian B.K.A. in connection with that of the Caledonian Horticultural Society. Twenty-four classes, with good prizes, for honey and beeswax, including seven open classes (three prizes in each). Schedules from W. Reid, Secretary, Heriot, Midlothian. **Entries close September 7.**

September 15, 16, and 17, at Crystal Palace.—Surrey Bee-keepers' Association Annual Exhibition of Bees, Honey, Wax and Appliances, &c. Twenty-five classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, Secretary, Marden House, Redhill, Surrey. **Entries close September 1.**

October 4 to 7, at the Agricultural Hall, London.—Show of Honey and Bee-produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, &c., including the valuable Silver Challenge Cup of the B.B.K.A. Schedules from Mr. Wm. C. Young, Secretary, 12, Hanover-square, London, W. **Entries close September 5.**

*** *Several Letters and Queries are unavoidably held over till next week for lack of space.*

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

J. W. (Brewood).—*Soluble Phenyle.*—The address of manufacturers appears on page 168 of "Guide Book" (eighteenth edition), and also in the ordinary advertisement pages of same work.

J. A. AITKEN (Co. Fermanagh).—*Bee Nomenclature.*—Bees sent, without being "pure blacks," are the ordinary or common bee of the country. A really black bee is seldom seen; since the importation of foreign varieties began nearly all show traces of crossing.

Suspected Combs.

J. B. (Luton).—Nothing whatever wrong with comb sent. All mature brood has hatched out in transit, and such as is not mature has simply died through cold and exposure.

DANUM (Doncaster).—Comb is infected with foul brood. We regret delay in reply owing to letter being wrongly addressed and only now traced.

A BEGINNER (Braintree).—Comb is very badly affected with foul brood, and all combs should be promptly burnt. It seems a case for drastic treatment, so if hive is not a good one we should burn the lot, including bees.

Honey Samples.

E. C. (Kent).—Section sent (a very well-filled one) is simply spoiled by honeydew.

F. MITCHELL (Eastbourne).—The colour of your sample is characteristic of honey from Trifolium incarnatum or crimson clover; honey from the latter is also always rather rank in flavour.

"ANXIOUS G." (Chelmsford).—Honey is from mixed sources, the dark colour being caused by a slight admixture of honeydew.

HEDLEY V. FIELDING (Dublin).—As far as can be judged from very small piece of comb-honey sent, the quality is fairly good on all points. The half-dozen broken cells of sample are, however, not quite suitable for accurately estimating "colour, flavour, and consistency" respectively.

OSBORNE-SMITH (London, W.).—Sample No. 1 is poor in quality; being thin and rank in flavour, the latter defect, no doubt, owing to a large admixture of honeydew. No. 2 is a nice honey, good in colour and fairly so in flavour, but rather thin in consistency.

Special Prepaid Advertisements.

Twelve words and under; Sixpence; for every additional Three words or under, One Penny

SPECIAL NOTICE.—Orders for three or more consecutive announcements in above are inserted in our monthly, the "Bee-keepers' Record," free of charge

Advertisements for current issue must be received by first post on Tuesday.

GUARANTEED good EXTRACTED HONEY, in 14 lb. tins and upwards. Sample 3d. DAVID HANCOX, Deddington, Oxon. C 37

FOR SALE, THREE healthy STOCKS, on Bar Frames, 30s. each. Packed on rail. PHILLIPS & YOUNG, Stevenage, Herts C 40

CUTLERY from the Warehouse to the Home. Razors, 1s., 1s. 6d., 2s. each. Scissors, 5in., 6in., 7in. long, 1s. 6d., 1s. 9d., 2s. 6d. each. Ladies' Cutting-out Scissors, 2s., 6d. each. Nail Scissors, 1s. 4d. each. Pruning Knives, 2s., 2s. 6d. each. Pruning Scissors, 5in. long, 2s. 2d. each. Table Knives, Dessert Knives, 16s. and 14s. per doz. (Beef-carver, Knife, Fork, Steel, 6s. 6d.) white handles. Cash with order. GEO. CRESWICK, Snaithing Apiary, Rammoor, Sheffield. C 43

FOR SALE, APIARY of 24 Bar-Framed Hives and 4 Skeps, well-stocked, healthy. Inspection Invited. Price £20 or offers. F. SKINNER, Middle Aston, Steple Aston, Oxon. C 42

FOR SALE, SECTION and EXTRACTED HONEY. Prices quoted for quantities. PHILLIPS & YOUNG, Stevenage, Herts. C 41

WANTED, HONEY EXTRACTOR. Good condition. Full particulars, C., 13, Victoria-street, Dunstable. C 39

TO HEATHER HONEY PRODUCERS. My honey harvest, finishing shortly. I shall have for dispatch early in August, all from perfectly healthy stocks, 150 Shallow Frames of Drawn-out Combs, in racks of 8, fitted with wide ends, at 7s. 6d. per complete rack. 100 W.B.C. Section Frames in racks of 7 each, fitted with 3 Sections and Divider, with Drawn-out Combs, at 7s. 6d. per complete rack 200 Unused first quality Section, and sufficient foundation for 5s. J. W. AVERY, Deverill, Warminster. C 30

WANTED, for a country house in Berks, a qualified CARPENTER, with a thorough knowledge of beekeeping, to carry out sundry carpentry work and to assist in enlarging and superintending an apiary. Apply by letter, stating age, qualification, and wages required. No board or lodging provided. Address E. G., Queen Anne's Mansions, London, S.W. C 26

HEALTHY DRIVEN BEES (commencing August), 3s. 6d. per lot.; boxes returnable. PURE EXTRACTED HONEY, 56s. per cwt. THE APIARY, Woodmancote, near Cirencester. C 32

6 NEW "W.B.C." HIVES, with frames, 15s. each. PARKES, Hooton Park, Cheshire. C 29

1904 FERTILE QUEENS, 3s.; selected, 3s. 6d. Guaranteed safe arrival in introducing cages. TOLLINGTON, Woodbine Apiary, Hathern C 33

WANTED, HONEY in bulk, sample price; also DRIVEN BEES. HORTON, Flixton Manchester.

SWIFT'S QUEENS. (Ligurian Hybrids), 1s. each. 3-Frame Nuclei, with Queens, 15s. each. Dark Honey, 12s. 6d. per 28-lb. tin. Samples 2d. H. SWIFT, Expert, Churchdown, Cheltenham. C 34

WANTED 3 or 4 FRAME EXTRACTOR, second hand. TATNALL, Horcham-road, Sussex. C 35

DRIVEN BEES WANTED at earliest date possible. Price per lb. to MACDONALD, School House, Morish, Ballindal'och. C 38

8 HIVES BEES on 10 to 15 Frames. H. EDRIDGE, 35, Rothschild-street, West Norwood. C 36

10 SUPERS, with clean, healthy, shallow combs, 7s. 6d. each. BUTTERY, Forge Apiary, Wheaton Aston, Stafford. C 16

SIMMINS' QUEENS are reared and mated by a new process of selection, which ensures heavy yields. Queen-rearing a speciality since 1875. Safe introduction guaranteed for nearly 20 years. Address, SIMMINS, Broomham, Heathfield Sussex.

IMPORTED ITALIAN QUEENS, 6s. each, in introducing cages. Safe arrival guaranteed. E. WOODHAM, Clavering, Essex. C 28

ORDERS for DRIVEN BEES, commencing August, now being booked. 1s. 3d. lb. Boxes, 2s., returnable. Safe delivery in rotation. DAVIDSON, Expert, Beecroft, Basingstoke. C 27

Prepaid Advertisements (continued).

DRIVEN BEES, delivery to August 20th, 4s. per lot. After this date, 3s. 6d. Orders cash. Delivered rotation. Boxes returnable. Order early. T. PULLEN, Ramsbury, Hungerford. C 25

LIGHT CLOVER HONEY FOR SALE. £2 16s. cwt. Packed free. COMLEY, Fairford, Glos. C 21

BEE GLOVES (with gauntlets), new material, safe and sure, 2s. 6d. post free. GREENHILL, Grahamroad, Wimbledon. C 2

BEE-PROOF COSTUMES, 7s. 6d. Greatest comfort to lady bee-keepers. Picturesque, workmanlike. Send length from collar to bottom of skirt. Mrs. WATSON, Bothenhampton Vicarage, Bridport. C 3

ENGLISH MADE HONEY JARS. 1 lb. screw cap, 16s 6d. per gross. JAS. DYSON, Stainforth, near Doncaster. C 4

FERTILE QUEENS, ready now, 3s. 6d., in Introducing Cages. E. W. CARBINES, Bee Expert, Cardinham, Cornwall. C 10

BUY from the Largest and Cheapest Depot in the South. Large healthy Swarms, 15s. each; Stocks on Standard Frames, 15s. and 20s.; Wells Hives, soiled, 12s. 6d. each, cost 35s.; Guinea New Hives for 15s.; 30s. Wells Hives (New) for 20s.; Nucleuses, 3s. 6d.; best American (dovetailed) Standard and Shallow Frames, 6s.; 100 Excluders, 6d. each; Best Slotted Metal Dividers, 5s. 6d. 100; Plain Metal 4s. Regulating Feeders, 1s. each; Section Travelling Crates for one dozen, 1s. 9d. (two dozen, 2s. 6d.); Super Clearers, 1s. 3d.; Quilts, 4d.; Best Split Sections, 2s. 100. Few Stocks Bees in Skeps, 10s. each. Standard and Shallow Frame Supers, 1s. and 1s. 6d. each. Wide Metal Ends, 3s. 6d. gross. Terms cash. Scores of testimonials received. G. SPEARMAN, Colesbourne, Cheltenham. B 54

NEW SECTIONS WANTED. Best quality. T. SMITH & CO., Cambridge-street, Hyde Park, W. B 73

MESSRS. STONE & SONS, CHEMISTS, EXETER, are BUYERS of English BEESWAX, in large or small quantities. Write, stating quantity and price required. A 98

SELECTED "NEVER-SWARM" FERTILE QUEENS, in Introducing Cages, 4s. 6d. With strong nuclei, 10s. 6d. each. HARRIS, Wavendon, Bletchley. B 94

WANTED, 4 or 5 lb. lots of DRIVEN BEES early in August. State price per lb., delivered at Goathland, near Whitby. Rev. R. M. LAMB, Burton Pidsea Rectory, Hull. B 98

COMFORTABLE APARTMENTS for brother bee keepers visiting Douglas. **Terms: tea, bed, and breakfast, 3s. 6d.; or full board, 5s, per day. HORSLEY, Merridale House, Top of Castle Drive, Douglas, Isle of Man.** 932

DON'T BEE STUNG! Use the "Burkitt" Bee Glove. Pronounced success. Very light in substance. Unsolicited testimonials from all parts. Price 2s. 6d. per pair. With self-adjusting Sleeves, 3s. 6d. per pair, Post-free from EDWARD REYNOLDS, Sole Maker, Andover, Hants. Special terms to agents.

SECTION GLAZING.—LACE PAPER, in neat patterns; White, 1 in. wide, 100 7d., 300 1s. 6d., 500 2s. 4d., 1,000 4s. 6d.; Pink, Green, and Blue, 1 in. wide, 100 8d., 300 1s. 9d., 500 2s. 9d., 1,000 5s. LACE BANDS (lace both sides), 2¾ in., 3 in., and 3¼ in. wide; White, 100 1s. 3d., 200 2s. 4d., 300 3s. 3d., 500 4s. 6d.; Lace Bands in Pink and Green, 100 1s. 6d, 300 4s. 3d., 500 6s. All post free. W. WOODLEY, Beedon, Newbury.

BEE-KEEPERS' SUPPLY BUSINESS
FOR SALE.

The leading BUSINESS in Scotland (established 28 years ago) is FOR DISPOSAL, Owner wishing to retire from business. The business is genuine and shows a steady growth. Capital required, £1,000 to £2,200 according to arrangement. Apply "BUSINESS," c/o *Bee Journal* Office.

QUEENS. English-bred Italians (Doolittle's Strain), 5s. each. A few Black Queens for disposal, 3s. each. Terms, cash with order.
GRIMSHAW & SPINK, Manston Apiary, Crossgates, near Leeds.

Editorial, Notices, &c.

DEVON BEE-KEEPERS' ASSOCIATION.

ANNUAL SHOW.

The seventh annual exhibition of honey, wax, bees, and appliances was held at Queen's Park, Paignton, on Wednesday, July 27, in conjunction with that of the Paignton and District Gardeners' Association.

As the result of a late and somewhat uncertain season, the entries were slightly fewer than last year, and the section classes were not up to the usual high standard. Extracted honey good.

Col. Walker acted as judge, and gave a lecture on "The History and Modern Practice of British Bee-keeping."

The following are the awards:—

Twelve 1-*lb. Sections* (8 entries).—1st, C. Squire, Mortehoe; 2nd, J. Seldon, Umberleigh; 3rd, H. Patey, Shillington; v.h.c., W. E. Brooking, Kingsbridge; h.c., C. Wilson, Slapton.

Three Standard or Shallow-Frames of Comb Honey, for Extracting (4 entries).—1st, J. B. Houle, Chittlehampton; 2nd, C. Squire; v.h.c. J. Seldon (judge's prize).

Three 1-*lb. Sections* (*for non-winners at any previous honey show*) (4 entries).—1st, Miss A. Coote-Brown, Lustleigh; 2nd, Mrs. Leigh Holland, Exmouth.

Twelve 1-*lb. Jars Light Extracted Honey* (10 entries).—1st, E. Scholefield, Chudleigh; 2nd, J. B. Houle; 3rd, F. Phillips, Thorverton; v.h.c., C. Squire; h.c., Miss E. S. Hole.

Twelve 1-*lb. Jars Medium Coloured Extracted Honey* (9 entries).—1st, Dr. Phillpotts, Babbacombe; 2nd, C. Squire; 3rd, Miss Maye, Ipplepen; v.h.c., E. Scholefield; c., W. T. Wellacott, Bradworthy.

Twelve 1-*lb. Jars Dark Extracted Honey* (7 entries).—1st, E. Scholefield; 2nd, W. H. Piper, Sidmouth; h.c., Miss Pittis, Uplyme.

Six 1-*lb. Jars Granulated Honey* (*any year*) (6 entries).—1st, E. Warren, Tavistock; 2nd, W. T. Wellacott.

Beeswax (8 entries).—1st, E. Scholefield; 2nd, R. Dutton, Essex.

Display of Honey, Wax, and Honey Products (2 entries).—1st, J. Seldon; 2nd, H. Patey.

Collection of Hives and Appliances (no prize offered).—Award of merit to J. T. Burgess and Son, Guinea-street, Exeter.

Frame Hive Made by Amateur Member D.B.K.A (1 entry).—Miss Pittis.

Dr. Phillpotts' Prize of One Guinea for Two Best 1-*lb. Sections Not Forming Part of Any Other Exhibit* (8 entries).—W. E. Brooking.

HANTS AND ISLE OF WIGHT B.K.A.

SWANMORE BRANCH.

The annual show of this branch was held at Bishop's Waltham on July 27, in connection with that of the Bishop's Waltham Horticultural Society. About 600 lb. of honey was staged, and, considering the season, the exhibits were satisfactory. Some of the sections shown by Mr. W. G. Hedges were excellent alike in colour and sealing. The weather proved very unfavourable, but a fair number of visitors attended the show. The Rev. W. E. Medlicott acted as judge, and made the following awards:—

Twelve 1 *lb. Sections.*—1st, A. Royds, jun.; 2nd, W. G. Hedges; 3rd, E. Ainsley.

Six 1 *lb. Sections.*—1st, W. G. Hedges; equal 2nds, E. Ainsley and A. Royds, jun.

Three 1 *lb. Sections.*—1st, E. Ainsley; 2nd, Miss Martin; 3rd, W. G. Hedges.

Single 1 *lb. Section.*—1st, W. G. Hedges; 2nd, Miss Martin; 3rd, E. Ainsley.

Three 1 *lb. Sections* (*Novices*).—2nd, Mrs. Merewether.

Display of Honey.—1st, W. G. Hedges; 2nd, E. Hedges.

Twelve 1 *lb. Jars Extracted Honey.*—1st, E. Ainsley; 2nd, W. G. Hedges; 3rd, E. Hedges.

Six 1 *lb. Sections and Six* 1 *lb. Jars Extracted Honey.*—1st, W. G. Hedges; equal 2nds, E. Ainsley and E. Hedges.

Three 1 *lb. Sections and Three* 1 *lb. Jars Extracted Honey.*—1st, W. G. Hedges; 2nd, E. Ainsley; 3rd, W. Cooper.

1 *lb. Section and* 1 *lb. Jar Extracted Honey.*—1st, W. G. Hedges; 2nd, E. Ainsley; 3rd, Miss Martin.

3 *lb. Granulated Honey.*—1st, W. G. Hedges; 2nd, W. Cooper.

Two Shallow Frames Comb Honey.—1st, E. Hedges; 2nd, W. G. Hedges.

Confined to Members of H. and I.W. B.K.A.—*Twelve* 1 *lb. Sections and Twelve* 1 *lb. Jars Extracted Honey.*—1st, W. G. Hedges; 2nd, Mr. Drew; 3rd, E. Hedges. These prizes carry the Silver Medal, Bronze Medal, and Certificate respectively of the County Association.

A special prize was also awarded to Mr. W. G. Hedges for an ornamental design in honeycomb.—(*Communicated.*)

REVIEWS OF FOREIGN JOURNALS.

By "Nemo."

In the *Bulletin de la Société Romande d'Apiculture* a discussion is going on as to the best race of bees in Switzerland. The consensus of opinion is that the common black bee is the

best for that country. M. C. Bretagne says:—"We have in Switzerland a race of bees well suited to our climate, robust, industrious, and quiet, a slight infusion of foreign blood making them more active. They are less excitable during the honey harvest, and do not exhaust themselves by useless activity, to the detriment of their stores for three-quarters of the year. It is these bees that enable the bee-keeper to supply the demand of his customers. They may have only one super, but this will be full and abundant honey stored in the box below, whereas by their side the magnificent Italians will have two partially-filled supers and nothing below. I do not speak about Carniolans, whose whole activity is employed in raising brood and more especially queens."

In *Revue Eclectique* a curious incident is related by Abbé Volpelier. This spring, in the Commune of Recoules (Aveyron), bees have deserted their hives wholesale. Those bee-keepers who owned fifteen to twenty colonies have only four or five remaining. The bees did not leave their hives owing to a scarcity of stores, for there was an abundance of honey in them. Some of them were short of pollen, but the desertion is not attributed to this cause, as others had plenty of it. The combs were perfect, and not affected by moisture, and although the Abbé is an expert bee-keeper, he is at loss to account for this strange behaviour on the part of the bees.

In *Elsass-Lothringischer Bienen-Zuchter*, a new medical use of honey is described by Rev. F. Burvenich. A child, two years of age, scalded its arm badly with boiling water. The affected part was immediately covered with honey and wrapped round with a linen band. The pain soon ceased and healing was rapid, as the honey protected the scalded part from the air. The bandage was changed every day, and it was easily removed without causing the child any pain by being moistened with tepid water.

In *Le Rucher Belge* we read that the Government Railway are going to run a special train at the end of July to transport colonies of bees for the honey harvest in the Ardennes, if 16 wagons can be insured. The train is to start from Fliron at 4 a.m., and stop only at stations where wagons of hives are to be attached. The principal stopping-place will be Francorchamps at 10 a.m., where many of the wagons will be left, the remainder of the train going on to the terminus, Trois-Ponts, and arriving there at 10.30 a.m. No goods of any sort will be taken, and the train will only stop to attach wagons of hives. There will be no shunting, and special will be taken in stopping and starting to prevent jarring.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "*THE EDITORS *of the 'British Bee Journal,' 10, Buckingham-street, Strand, London, W.C." All business communications relating to advertisements, &c., must be addressed to "*THE MANAGER, *'British Bee Journal' Office, 10, Buckingham-street, Strand, London, W.C."*

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

[5595.] "*The Honey Bee.*"—"I believe that I shall be doing a real favour to any young bee-keeper who wishes to be in the front rank in bee-keeping, and to get out of it all the enjoyment to be had, if I urge him to get 'The Honey Bee,' by T. W. Cowan, which book has just been thoroughly revised and brought up to date. Even if you have all the excellent text-books on bee-keeping published in this country, you need this work to teach you the natural history, anatomy, and physiology of the little toilers that bring us our bread and butter." So writes that veteran bee-keeper, Dr. C. C. Miller. Mr. Root adds:—"I am proud to possess a copy of this little work. Mr. Cowan is so careful in his statements that I consider him an authority on any scientific subject on which he writes." I heartily endorse these two short extracts from a recent issue of *Gleanings* in regard to this "admirable scientific work," to quote the description of it given in the "A B C of Bee-keeping." A gentleman to whom I lately gave a perusal of my copy says it opened up to him a new world of wonders, and revealed vistas of Marvel-land hitherto undreamt of; and, much as he admired the insect, and enjoyed the pursuit as a hobby, he will henceforth hold the busy bee in much higher esteem. I have pleasure in drawing attention to this excellent work on the anatomy and physiology of the bee, and recommending it to all who wish to study bee-keeping anything more than superficially, or beyond the "bread and butter" aspect. Personally I owe the work a deep debt of gratitude, as the purchase of it, when originally issued, first made me a bee-keeper. Each year as it passes only broadens and deepens my love for the hobby. Perhaps not many living bee-keepers have read more bee-literature than I have done, yet I can truly say no other

three books rolled into one have received more study from me than Mr. Cowan's "Honey Bee."

Over-Supering.—I would deprecate too many sections being given to a stock at one time. If a rack is pretty nigh drawn out one other may be inserted between it and the tops of frames. It would be, as a rule, unwise to give two. The bees' labours would be too much divided, and they themselves become too much a segregation of atoms to do the finest work. When experimenting some years ago I repeatedly discovered that this over-supering resulted in scamped work, with the result that sections were sometimes sealed when little more than half drawn out, and frequently weighed only about twelve ounces. On the other hand, if one of the racks was given below and the other above the first, the bees concentrated their energies on the lower two and simply disregarded the presence of the third, until their numbers had increased, or the work of storing was so well forward in the others that they felt a desire for more comb-building. Under the latter circumstances, sections were all well drawn out and heavy.

Tin Inside Hives.—The idea that the presence of girders and metal ends chills the hive interior is, I consider, a creation of the imagination. That either aids an actual escape of internal heat is, I know, an error. When these ends lose their first chill they assume a perceptible warmth, which they retain without any extra expenditure of caloric on the part of the bees while they remain in the body-box. Their presence has so many compensating advantages that we might allow for some slight drawbacks, but I know of none which are not more than shared by any other species of spacers known to me, while they have several advantages not participated in by these others. In the same way, I have never known the use of metal dividers in section-racks act as a deterrent or cause for making the bees any slower in taking to them when they really want more storage-room. Here, indeed, in many ways they are distinctly preferable to wooden ones.

A Superb Month.—July has throughout been an ideal bee-man's month, for my notes show that for twenty-eight days V.B. or X.B. was the entry in regard to their industry. Not content with an eight-hour day, they have worked most indefatigably for ten hours, with an occasional spin of twelve or even over. The month was well in before white clover fully recovered the blasting influence of the frost of June 28, which handicapped honey-gathering, but since it has been very rich, with a profusion of bloom, imparting to whole fields a resemblance to a garden-bed, showing an unbroken expanse of white. The weather has been unprecedentedly propitious, with bright sunshine all day long. Farmers say it is too dry, but our heavy, retentive soil has kept the growth of the clover blossom unchecked by the drought, and now we have the heather thus early coming into bloom. Racks of sections were not on with me until July 3, but they were taken to at once by the stronger colonies, and gradually added to, so that on the closing day of the month one is actively employed in 105 sections, three have each four racks on, others three, and even the weaklings mentioned earlier in the season are working in two. One only swarmed. It was returned, but came out again next morning, when it was accepted and hived on old stand, the original hive being removed to a new site. The swarm is now engaged in filling two racks. By the way, they had three on when they swarmed! My one English swarm is well on with second rack, and will, in a very few days, be asked to accept a third. This is good, but a neighbour has a better. His swarm arrived from its Worcester home so late as June 27, yet on the corresponding date of July he had them so bunching out and loitering on the flight-board that he gave them a third one. I think that work like this deserves to be recorded. Almost all our ancient writers set down a dry season as a honey one, while a wet one was sure to be a swarming one. Up to date this month will compare very favourably with 1894 and 1901—the two best years in my experience.

A Paucity of Drones.—Hereabout, May and June passed without the appearance, I may say, of a single drone, and the end of July showed a perfect dearth of these gentlemen. The fine honey season, the want of swarming, and the practical non-appearance of drones hang as links of a chain, I doubt not. No drones, no swarming. If so, and my conclusion is a logical deduction from the given facts, might not those troubled over-much with the swarming fever work along these lines a little more to aid them in swarm prevention?—D. M. M., Banff.

BEES IN SOMERSET.

EXPERTS' CERTIFICATES.

[5596.] Like your correspondent "E. W., London," who writes in B.J. of July 14 (3481, page 276), I last year secured the third-class certificate of the B.B.K.A. and wish to qualify for second-class. But I am afraid to present myself for examination, fearing that I should not be able to reduce my ideas to writing. Practically I am a self-taught man, for there was no

Council or Board Schools in my younger days, and at the age of nine I was tending cows by the banks of a canal with the object of helping to bring in a little to our somewhat scanty larder. So you will understand that my literary attainments are not of a very high order. I should, however, not be afraid of an oral examination, especially under so genial an examiner as I had before (Colonel Walker).

I have often taken up my pen intending to write you on some topic of interest to bee-keepers, but only on one occasion did I venture to send in anything for print, as I now do. In this neighbourhood the bees are not doing so well as one could wish. White clover is not over-abundant, and for want of moisture is stinted in growth; consequently there is less chance of the plant secreting nectar than it would have under more favourable conditions. My "take" will not average more than that last year, which was 37 lb. per hive. I am writing from an elevation of 526 ft. above sea-level; soil light and sandy, with a gravel subsoil, and we suffer much if our rainfall is not well up to the average. I trust that bee-keepers located in the valley where dry weather does not affect them so much will have secured a better harvest. I send name for reference and sign—HOPEFUL, Somerset.

The LATE "ROYAL" SHOW.

[5597.] In reply to Mr. Buckwell (5583, p. 274), I think his letter most unreasonable. The show had been open from Tuesday to Saturday until 7 and 8 p.m. each night. Many of our bee-friends had journeyed from the North and the Midlands to see it, and Acton is only about two miles from the show-ground; yet our friend had no time to visit until 4 p.m. on Saturday, when he complains of many of the exhibits being sold and packed up. Now, Sir, I take it that the success of the show depends on the exhibitors as well as visitors, and I claim that we have a right to some consideration. Now let our friend place himself in my position. I won prizes to the amount of 30s. My expenses are over £3; 15s. entrance fees, 10s. 1d. carriage of honey and plate-glass to, and 6s. 4d. from, the show, and the week's expense in London, also railway expenses, to say nothing of having a lot of honey smashed in going to the show. I did not want to go to the expense of bringing my honey back, therefore I sold out. I believe that is the object of most or all entering in the display. If this were forbidden, after packing up exhibitors could not get back to their families by Sunday, for some had to travel 120 and 140 miles. I cannot agree with our friend. After a show has been on a week, I do not think those that visit it after 4 p.m. on the last day are going to benefit it much.—J. PEARMAN, Derby, July 16.

BEES IN LANCASHIRE.

[5598.] People writing me as to honey from all over the county lead me to the conclusion that whilst in some parts there is as usual a good flow, on the whole it has not been a good season. I gather that the conditions that have prevailed at Ormskirk have been the same in most parts, some good hot sunshine, making ideal holiday weather, but constantly cool winds and cold nights preventing the flowers secreting and yielding nectar. May here was almost a better month than June. We have no hives with second supers of sections on, and very few with second supers of shallow frames, and very little honey properly sealed so far. Swarms have not been plentiful, but very large when they did issue. Maghull Apiary has done better than Ormskirk.—GEORGE ROSE, Liverpool, July 23.

AVOIDING FOUL BROOD.

[5599.] I notice a lot of discussion going on in your paper respecting foul brood. May I say that I keep about thirty-seven hives of bees, and at present, I am thankful to say, that disease is unknown among them? I always try to keep my bees as clean as possible. In doing this I put two new combs in the brood-nest of each hive every year, and also overhaul the frames and remove two of the worst and replace them with two clean ones and cover them up nice and warm. I think if every bee-keeper was to take this simple precaution we should hear less of foul brood.—T. W. COMLEY, Fairford, Glos., July 17.

THE FOUL-BROOD BILL.

[5600.] May I have the privilege of a few more remarks on this matter? Replying to Mr. Waddell's criticism, I have no objection to a small minority educating the majority, but I think that when it comes to putting a Bill through Parliament affecting the majority, it should have some say in the matter. The promoters of the Bill mean well, no doubt, but to secure a feasible one, as many as possible require to be consulted.

As suggested in my last letter, I think that in framing any such Bill the principle should be borne in mind "that they that are whole need not a physician, but they that are sick," and healthy apiaries should be exempted from inspection after a certain date, the inspectors' whole time being devoted to diseased stocks only.

The Bill provides that the present experts shall be the inspectors, but I fail to see how they can do anything to root out foul-brood during the few holidays that they are free from their ordinary employments. These holidays generally fall at a season of the year when it would be most exasperating to have our hives pulled to pieces. It is only by extreme care in handling that we can keep bees in our narrow town gardens, and to pull four supers off in May, June, July, or August does not make the place very safe for our neighbours.

I consider this Bill impracticable and likely to cause great annoyance to all advanced and careful bee-keepers if passed.

Will all bee-keepers please note the Rev. R. M. Lamb's remarks on page 295 of your issue of July 28. He says: "I have since the eighties kept foul-brood at bay by frequently renewing the combs." It is evident that careful bee-keepers need no legislation in order to protect them. Full particulars of preventive measures will be found in "The Guide Book," and, in careful hands they will succeed.—W. J. FARMER, Truro.

[5601.] In reference to Colonel Walker's letter (5586, page 283) I would draw his attention to the wording of Section 5, Clause (c) of draft of proposed Bill, where it states that the compensation is "not to exceed ten shillings" for treatment of any one stock, and the actual amount given will rest with a recommendation by the expert, which meets the cases Colonel Walker names. Compensation having been in force for some time in Ireland, they have therefore had experience in the working of it, and the drafting of the Bill has been approved of by the Irish B.K.A. Council, and by other authorities in Ireland. I have known cases where strong stocks, but diseased, have been treated for the good of a district, by having their brood-comb burnt, which deserved the ten shillings compensation. As often as not it is found, in the apiary of an average careful bee-keeper, that it is the strong stocks which contract the disease, from their more decided robbing proclivities, sooner than nuclei and stocks of minor strength in bees. I would point out that several writers in recent issues of the B.B.J., who have criticised the proposed Bill, have been raising objections which have nothing to do with the Bill itself, but with the County Council Bye-laws which will govern the working of the Bill, and which need not be all of one pattern, but framed to suit each individual county, and the associations can use their influence in drafting them. That the Bill is urgently required there can be no doubt.—GEORGE M. SAUNDERS, Hon. Sec. and Treasurer, Cumberland B.K.A.

[5602.] Seeing that the question of foul brood legislation is being discussed in the BEE JOURNAL, I should like to put in a word or so in favour of it. I think if your correspondent, Mr. Farmer, had seen as much foul brood in Cornwall as I have, and seen so many stocks ruined by it, he would hail the Bill with something akin to joy. I know of a very good honey district where the disease has nearly killed off all the bees, and people have given up bee-keeping altogether through its ravages. One man had twenty stocks, and in a short time lost the lot! He tried again after a few years with the same result; and this simply because he was located close to a man who kept bees in skeps, some of which were a mass of corruption. I also knew a man in Devon that three years ago had over thirty stocks, quite one-third of which were affected more or less though he held the third-class certificate. I say such a man is a great danger to bee-keeping in that district. We are only having the views of a comparative few through the B.B.J. I think it would not be difficult to get the opinions of the bulk of bee-keepers in each county, and I would make a suggestion, but you must take it for what it is worth.—J. E. S., London.

[The suggestion made is hardly now practicable.—EDS.]

THE SEASON IN ESSEX.

[5603.] Bee-keepers in this district are much disappointed at the state of things in their hives, so far. We have had no rain for weeks, and the temperature has been tropical, with the result that everything is dried up, and the bees have apparently little or no forage; this is corroborated by the slaughter of drones—mature and embryo—which has already set in in earnest. The limes, which were in splendid bloom, were scarcely touched by the bees, as the bloom rapidly became dried up. Clover, at time of writing, is conspicuous by its absence. Friends around here assert that what little surplus they have is being carried below, so that a frantic removal of supers has now set in! I have not heard of a single swarm in Romford this year, although last season—which was anathematised as being "really too bad"—we all rejoiced in the excitement of one or two each. My own stocks—four spring count—are a disappointment, and may, I fear, be taken as a general average. On one hive worked for sections, the super has never been occupied: probably owing to a failure in the "Royal" line. The other three hives, which are being worked

for extracted, were supplied with drawn comb on frames with wide ends. If the eight frames in each are fairly filled I shall be agreeably surprised, and shall, I believe, not stand at the bottom of the list in these parts. It is feared, however, that 1904 will be remembered as a regular scorcher, atmospherically; but a regular "frost" to the apiarian.—R. J. T., Romford, July 26.

FORMALIN FOR DISINFECTING.

[5604.] In your columns last year there was much discussion about the use of formalin as a "cure." I have given it a good trial, but cannot report any satisfactory result, certainly not where combs with sealed honey were treated. I cannot believe that the gas has the power of permeating the honey and killing the germs.

It may possibly be of use on empty combs, and I should like to hear from other bee-keepers what their experience has been.

I have also been much interested in the foul brood discussion in your columns and should like to be allowed to comment on Mr. W. J. Farmer's remarks anent the general prevalency of the pest. I quite concur with Mr. F. J. Cribb (5587) that the disease is more prevalent than most bee-keepers are aware of. Taking this neighbourhood, I may say, three years ago when I took up bee-keeping, there did not seem to be any of it here although it was known to exist about six miles away.

I unfortunately acquired some bees affected with foul brood from two sources, one in the town, without being aware of it at the time. Since then it has been an uphill fight for me. I have noticed the disease both in frame-hives and skeps in several directions in the town as well as in villages around. But very few bee-keepers in this district seem to know what the disease really is and therefore cannot recognise it.

In this district, therefore, I can readily say that the disease exists more than bee-keepers imagine, and I believe it is the case as a rule over the whole of the country.

I send name, and sign—North Dorset, July 27.

FOUL BROOD LEGISLATION.

[5605.] The Lindsey County Council of Lincolnshire to-day unanimously passed a resolution to petition Lord Onslow to present the Bill for the better prevention of foul brood, as desired by the Lincolnshire B.K.A.—F. J. Cribb, Sand Rock House, Retford, July 29.

BIRDS AND BEES.

[5606.] I saw a flycatcher (her young ones sitting on a tree by my apiary) catching bees as they flew backwards and forwards, and giving them to her brood. Not being sure that they were bees she was catching, I shot a young one, and on opening it I found two drones inside. I should like to know whether they only catch the drones, as if this is so they must do a certain amount of good in an apiary, as there always seems too many of them. —W. A. Megginson, Atherstone.

HONEY IMPORTS FOR 1903.

HOME AND FOREIGN.

[5607.] The enclosed particulars of honey imports, worked out from the last issue of the Board of Trade Returns, will, I hope, prove of interest to bee-keepers who work their apiaries on business lines. —T. I. Weston, Vice-chairman, B.B.K.A., Hook, Winchfield, July 29.

PARTICULARS OF IMPORTS OF HONEY DURING 1903.

	Cwt.	Declared value. £	Price.
Germany	322	450	price per lb. 2·994
France	1,642	4,448	,, ,, 5·804
Italy	212	334	,, ,, 3·375
U.S.A. Atlantic	2,413	2 935	,, ,, 2·607
,, Pacific	813	1,228	,, ,, 3 236
Peru	540	513	,, ,, 2 035
Chile	4,435	4,507	,, ,, 2·179
Other foreign countries	614	750	,, ,, 2·617
Total foreign	10,991	15,166	average per lb. 2 956
Australia	4	10	price per lb. 5 357
Canada	177	371	,, ,, 4·491
West India Islands	11,529	13,834	,, ,, 2·571
Other British Possessions	570	968	,, ,, 3·639
Total British	12,280	15,183	average per lb. 2 649
Total imports	23,271	30,349	

Queries and Replies.

[3507.] *Combs Breaking Down, etc.* — I should be pleased if you could give me any explanation of the following unfortunate catastrophe:—

1. A friend of mine, a bee-keeper in skeps for many years, was persuaded by me to start using the modern movable frame-hive. After having made two hives ("W.B.C." pattern) I drove four skeps last autumn, putting two lots in each hive on new foundation for him. They were fed, and did excellently. At the end of May I supered one for him with "Standard" frames, and the combs were soon built and filled, and when about one-third

sealed over I put a *shallow* super underneath the standard frame one. So far all had gone well but my friend sent me word the next day that the bees were outside, and I thought it was perhaps due to their being upset—as, indeed, it was so—by moving the super, and that they would settle down in time. The distance from my house is over two miles, and, being busy, I could not go until the fourth day, upon which I had received word that honey was running out from floor-board, and dead bees lying about in all directions. That evening I went, and upon opening the hive I found every comb in top super broken and fallen down, and bees drowned. The honey had run down through the shallow super, and here was another batch of dead bees; but, most surprising of all was the examination of the brood-chamber, for the results were identically the same, most of combs containing brood and honey, broken off and fallen, honey run out, and the whole stock of bees drowned. I may say that the comb was properly wired in, the wire not having broken or given way, and the breakage taking place 1 in. or 1½ in. from the top bar. Of course, had my friend examined hive at once the loss of bees and brood-chamber could have been averted; but, owing to its being his first year with boxes, he had not the necessary confidence; had I also gone at once it could have been partially avoided—this I know, but what I do not know is the cause.

My own humble opinion — probably wrong—is that the bees were annoyed at honey being moved, and set up such a heat that the combs simply melted, and gave way.

I may mention that it was during the time of the earth-tremor in Staffordshire, and weather very hot.

2. Is honey extracted before being sealed as good as that which is extracted afterwards?

3. Would you kindly give a list—in order of merit—of flowers producing nectar for bees—in England, of course?

An explanation would set at rest the mind of.—PUZZLED, Stafford.

REPLY.—1. Insufficient ventilation and excessive heat no doubt caused the combs to become soft and break down. The earth-tremor of itself would be hardly violent enough to do the damage. If the hive was not shaded from the heat of the sun's rays this would also cause the combs to break down. 2. No; and not until the superfluous moisture has been evaporated. 3. It would take too much space to publish a list of such flowers; but the best are fruit trees, such as apple, cherry, pear, and raspberry, then white clover and sainfoin yield the main supply. A list of flowers, with their values, can be procured from Messrs. Sutton and Sons, Reading, and is the most complete ever published.

[3508.] *Syrup and Honey from Brood-Combs as Bee Food.*—Will you kindly say in B.B.J. 1. Whether syrup and honey that have been extracted from brood-combs (to allow queen more room to lay eggs) needs any special preparation, or mixing with fresh syrup before being given as food in autumn? 2. What is honey-dew? I cannot find it mentioned in the "Guide Book." 3. Could you tell me the principle on which the "Wells" hive is worked, and what advantages are gained? 4. Should combs that have traces of foul brood of very old standing, but none of recent date, be used again, either by the stock from which they were taken or in any other, and should these combs be treated in any special way? I send name, etc., and sign —GRIP, Alloa, N.B.

REPLY.—1. No preparation if it is of about same consistency as the ordinary syrup-food given in autumn. 2. Honey-dew is a sweet, saccharine substance found on the leaves of trees and other plants. There are two substances that go by this name, one exuded from leaves, as above stated, the other by aphidian insects on leaves, etc. 3. Your best course is to obtain the pamphlet on the "Wells" system published by Mr. George Wells, Eccles, Aylesford, Kent, who originated the system in question. 4. On no account should combs that have contained foul brood be used again for bee-purposes.

[3509.] *Transferring Bees from Skeps to Frame Hives.*—I have been a reader of your journal for several years, and have six hives of bees, two of which are swarms of this year. The first swarmed on June 9, the second on the 18th, and they are both at present in straw skeps, as I could not get frame-hives at the time that they swarmed. Now I have the hives ready, and the skeps are full of brood and honey, this being a fine honey district. I wish to get them into their new homes as soon as possible so that they may be ready for the winter. How am I to get them into these frame-hives? I send name and sign —C. A. B., Aylesbury.

REPLY.—Our advice is to winter the bees in their present skeps and defer transferring till next spring. This will be found true economy in the end, because the bees will winter better, no brood will be sacrificed, and no feeding required, while a full supply of natural honey and good batch of late-bred bees will cause the skeps to be in excellent condition for transferring themselves to the frame-hives early next year. You will thus get straight, well-built combs instead of patched-up ones, and the stocks will probably be in

better order for storing surplus than if wintered in frame-hives, to say nothing of the trouble involved in transferring and feeding up for winter.

[3510.] *Removing Bees from Church Roof.*—I should be glad of directions which would enable me to remove an old-established colony of bees located in the roof of the chancel of my church. The entrance to the combs is at the angle of two walls, and the bees get under the slates by means of an opening below the zinc watercourse between the two roofs of the chancel and nave. The height of entrance from ground is about 10 ft. There is no means of ascertaining how far the bees have built combs in the roof, because the slates outside and the plastering inside the church effectually hide them. I therefore ask: How should I proceed to drive them into a "W.B.C." hive, and will it be a difficult operation? I do not think of attempting the removal until Michaelmas. —(Rev.) R. T. de C., Somerset.

P.S.—The enclosed photo shows the exact position where the bees enter; it is just below the arrow marked on photo.

Reply.—The photo sent makes it quite clear that the bees cannot be "driven" from roof at all. Nor can the position of combs be ascertained without removal of slates outside or plastering within. If the bees must be got out, removal of slates would be simplest and least costly, but for the bees alone they are not worth the trouble, seeing how cheaply driven lots of bees may be had in autumn. If removal is absolutely necessary it would need the help of some one with practical experience, as the task is beyond the powers of a beginner.

[3511.] *Bees Transferring Themselves to Frame-Hives in Autumn.*—I bought a swarm of bees in May last, and they are now well settled in a skep, but, being anxious to start a frame-hive, and as I left it rather late, I thought it a pity to drive them from the skep, and so lose so much brood. I have therefore put in frames of comb in brood-chamber, and set the skep on top of them. Have I done right? What is best for the future?—M. J., Swansea.

Reply.—There will be no chance of the bees transferring their brood-nests from skeps to frame-hives so late in the season as end of July. This being so, the question of the future is all that remains for reply. On this we should advise leaving the skep where it is till end of August, then examine and ascertain the condition of frames in lower hive. If—as we expect—little or nothing has been done in them, remove the hive and allow the skep to take its place on floor-board. Winter the bees in skep, and repeat the transferring operation at end of April next year.

[3512.] *Driving Condemned Bees for Cottagers.*—Will you kindly give me your opinion as to the best time for driving bees from cottagers' skeps? The yield from the limes is over, and, in consequence of the dry season, there is very little clover in bloom, therefore the only apparent sources of supply are the blackberries and garden flowers. This being so, I imagine the end of August would be the best time for cottagers to take the honey, or would it be more economical to take it earlier and run the risk of finding brood in the central combs? I am anxious to get several driven lots for stocking empty hives. I send name, and sign—Subscriber, Dorset.

Reply.—It is advantageous to defer driving condemned bees as late in the autumn as convenient, providing time is left for feeding up the driven bees and before cold weather stops them from sealing over the food given them for wintering on. The advantage is gained by securing the last batch of brood reared, the value of which is found in the early spring when foragers are needed to take the place of worn-out bees, which die off so rapidly at that time.

PRESS CUTTING.

QUEENS FIGHTING.

Writing of bees reminds me of a very interesting and curious duel between two rival queen bees, which a friend of mine once witnessed. The two queens were placed under a tumbler, and there they fought a strange battle. They grappled and curled round each other, and seemed ready again and again to inflict the fatal sting. But it was half-an-hour or so before one queen stung and killed the other. Only one queen used her sting, and it seemed as though they hesitated and waited till they both felt sure—through some mysterious influence—which was the queen that ought to live, and which was the queen that should be slain, for the good of the race. My friend believes that in a duel between queen bees only one uses her sting, the other, when she is convinced that she ought to perish, submitting to her fate! It may seem incredible to those who do not study bees; but we must bear in mind that if both queens in their death grapple were to use their stings, a hive might frequently be thrown back, if not in the end actually destroyed. True, the bees can make a new queen by royal jelly, etc., out of the grub of a common worker; but only provided they have grubs of less than three days old.—*Land and Water.*

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices in this column, which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

August 10, at Wye.—Kent Honey Show.—Several classes for Extracted and Comb Honey, Trophy, Wax, Mead, Cakes, &c., &c. Liberal cash prizes and silver medals. Open Classes for Single 1-lb Jar Extracted Honey (Light); Ditto (Dark); Single 1-lb. Section, with prizes of 20s., 10s., and 5s. in each class. Bee Demonstrations, Horticultural Show, Cycle Sports, &c. Schedules from J. Tippen, Secretary, Wye, Ashford, Kent. **Entries close August 5.**

August 11, at Bath.—Annual Show of the Bristol, Somerset, and South Glos. B.K.A. Seven open classes for honey, &c. Cash prizes to value of £8 11s. Schedules from Mr. J. W. Brewer, 26, Lambridge-place, Bath. **Entries closed.**

August 11, at Goole.—Annual Show in connection with the Goole Horticultural and Agricultural Society. Six open classes, including separate classes for light and dark extracted honey. Good prizes and low entry-fee (viz., 6d.). For schedules, apply to Secretaries, J. Luddington and H. S. White, Lindum House, Goole. **Entries close August 6.**

August 13, at Lancaster.—Show of Honey, &c., in connection with the Lancaster Agricultural Society's Annual Show. Open classes for six 1-lb. sections; six 1-lb. jars extracted honey (light); six 1-lb. jars extracted honey (dark); and beeswax. Local class for three shallow frames. Lancs. B.K.A. silver and bronze medals and other specials. Schedules from Thos. Armitstead & Son, Lancaster. **Entries close August 4.**

August 13, at Burry Port.—Honey Show in connection with the Burry Port Horticultural Society, South Wales. Six open classes, including one for single 1-lb. jar extracted honey, with free entry. First prize, 12s 6d.: second, 7s. 6d.; third, 4s.; fourth, 2s. **Entries close August 9.**

August 13, at Hawkshead, Lancashire.—Honey Show in connection with Flower Show. Six classes. Also two medals offered by the Lancs. B.K.A. Schedules from A. Hargreaves, Hon. Sec., Hawkshead.

August 17, at Radstock, Bath.—Honey Show in connection with the Radstock and District Horticultural Association. Open classes, three prizes in each, for six 1-lb. sections; six 1-lb. jars extracted honey, and two shallow-frames for extracting. Members class for single 1-lb. jar extracted honey. Schedules from B. M. Clark, Sec., Fox Hill, Radstock. **Entries close August 10.**

August 17 and 18, in "The Quarry," Shrewsbury.—Annual Show of the Shropshire B.K.A. in connection with the Shrewsbury Great Floral Fête. Eight open classes for Honey. Entry free for 1-lb. Jar and 1-lb. Section. Schedules from S. Cartwright, Hon Sec., Shawbury, Shrewsbury. **Entries close August 5.**

August 24, at Fleetwood.—Honey Show in connection with Fleetwood Floral and Horticultural Society. Open classes for Six 1-lb. Sections. Six 1-lb. Jars Light Extracted Honey, and Six 1-lb. Jars Dark Extracted Honey. Schedules from Edward Cook, Hon. Sec., Rossall Grange Farm, Fleetwood. **Entries close August 14.**

August 24, at Sandbach.—Honey Department of the Cheshire Agricultural Society's Show, under the management of the Cheshire B.K.A. Open classes for Hives, Sections, and Extracted Honey. Substantial prizes. Bee Lectures and Demonstrations on the show-ground. Schedules from T. A. Beckett, St. Werburgh's Chambers, Chester. **Entries close August 3 (at couble fees to August 10).**

August 24, at Bradford Abbas, Dorset.—Annual Show of the Yetminster and District B.K.A. in the old Vicarage grounds. Three open classes, including three 1-lb. jars extracted honey and three 1-lb. sections. Schedules (with entry form) from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne, Dorset. **Entries close August 20.**

August 24, at Reading.—Honey Show of the Berks B.K.A., in conjunction with the Annual Exhibition of the Reading Horticultural Society. Open classes for comb honey in sections and for extracted honey. Local classes include prizes of 20s., 15s., 10s., and 5s. for honey trophy. Also classes for owners of small apiaries. Schedules from D. W. Bishop-Ackerman, Hon. Sec. Berks B.K.A., 131, King's-road, Reading. **Entries close August 21.**

August 24 and 25, at Leamington.—Annual Show of the Warwickshire B.K.A. in connection with that of the Warwickshire Agricultural Society. Schedules from James Noble Bower, Hon. Sec., Warwickshire B.K.A., Knowle.

August 25, at Llangollen.—In connection with the Sixth Annual Flower Show. Open classes for Six 1-lb. Sections, Six Jars Extracted Honey, and Beeswax. Schedules from Frank Little, Brook Bank, Llangollen. **Entries close August 11.**

August 25, at Montgomery.—Montgomery and District Horticultural Society. Open classes for honey, six 1-lb. sections and six 1-lb. jars extracted honey. Prizes 10s., 5s., 2s. 6d. Entrance fee 1s. each class. Many open classes, flowers, fruit, vegetables. For schedules, apply Mr. W. Jones, Secretary. **Entries close August 18.**

August 27.—Twelfth Annual Show of the South of Scotland Bee-keepers' Association. Five open classes for extracted and comb-honey and wax. Schedule and entry form from Hon. Sec., S. M'Vie, Essex Park Cottage, Dumfries. **Entries close August 20.**

August 27, at Barnton, Northwich.—In connection with the Barnton Horticultural Society. Six local classes, and classes open to the county, and members of the Cheshire B.K.A. for twelve 1-lb. jars extracted honey, and for 1-lb. beeswax. The C.B.K.A. give their silver medal to winner of first prize for twelve jars of honey. Schedules from Mr. S. Wade, Barnton, Northwich. **Entries close August 20.**

August 30, at Cartmel, Lancashire.—Honey show in connection with the 32nd Annual Show of the Cartmel Agricultural Society. Three open classes for Comb and Extracted Honey (prizes, 15s., 10s., 5s., and 2s. 6d.), and Beeswax (prizes, 10s. and 5s.), along with silver and bronze medals of the Lancs B.K.A. Schedules from W. Cragg, Secretary, Cartmel, viâ Carnforth. **Entries close August 18.**

September 3 to 10 at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders' (12th) Annual Exhibition and Market. Numerous classes and liberal prizes for comb and extracted honey and beeswax. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad street, London, E.C.

September 17 to 24, at the Agricultural Hall, London.—Honey Show in connection with the twelfth Annual Exhibition and Market of the Grocery and Kindred Trades. Numerous classes and liberal prizes for comb and extracted honey and beeswax. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad-street, London, E.C.

Special Notice.—In connection with above Shows there will be a *Working Exhibit* illustrative of modern Bee-keeping and Honey-production, including *Demonstrations* with *Live Bees* and extracting honey from combs for sale by skilled experts. (See large advt. p. v.)

September 14 and 15, in Waverley Market, Edinburgh.—Eleventh Exhibition of the Midlothian B.K.A. in connection with that of the Caledonian Horticultural Society. Twenty-four classes, with good prizes, for honey and beeswax, including seven open classes (three prizes in each). Schedules from W. Reid, Secretary, Heriot, Midlothian. **Entries close September 7.**

September 15, 16, and 17, at Crystal Palace.—Surrey Bee-keepers' Association Annual Exhibition of Bees, Honey, Wax and Appliances, &c. Twenty-five classes (ten open to all). Increased prizes and medals, Schedules from F. B. White, Secretary, Marden House Redhill, Surrey. **Entries close September 1.**

October 4 to 7, at the Agricultural Hall, London.—Show of Honey and Bee-produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, &c., including the valuable Silver Challenge Cup of the B.B.K.A. Schedules from Mr. Wm. C. Young, Secretary, 12, Hanover-square, London, W. **Entries close September 5.**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

GRIP (Ellon, N.B.).—*Mating of Bees.*—The appearance of drone sent shows that it had mated with a queen.

"AOLISAN" (Torphins, N.B.).—The most recent descriptions of how to make bee-hives, bee-houses, etc., will be found in the "Practical Note Book," price 1s. 1d. post free from this office.

Honey Samples.

*** We have been notified from the Post Office of a package received broken with honey running from it, and therefore unfit for transit with the mails. It was posted at , and the office where the package lies is so far away we have not troubled to send for it. We trust this intimation will suffice to account for no reply being received by the sender.

CYMRAES (Anglesea).—Honey is excellent on all points, and would certainly stand a good chance on the show-bench.

G. J. W. (Chester).—Honey is from mixed sources, but its quality is deteriorated by an admixture of honeydew. With regard to "what such honey is worth," it is difficult to compare it in value to "clover honey worth 10d. per lb.," seeing that the latter is suitable for table

Suspected Combs.

F. W. (Saltash).—No disease in comb sent, brood is chilled only. It is impossible for "the larvæ to melt away in the cells" as stated; they can only die from either cold or from disease. We should suppose the stock to be weak in number and unable to cover the brood or keep it warm. We regret your letter has been mislaid, hence delay in reply.

J. I. (Thornaby-on-Tees). — Comb is affected with foul brood.

BEGINNER (Staffs). — Brood in your sample is diseased. Moreover, it is not a recent outbreak, but foul brood of old standing. The appearance indicates the use of some disinfectant or preventive, as most of the larvæ being reared are chilled only.

BEES (Belfast).—No. 1 is affected with foul brood, though not badly, as yet. No. 2, chilled brood only in sample.

S. C. (Leicester).—Very bad case of foul brood. We advise burning the lot!

*** *Several Letters and Queries are unavoidably held over till next week for lack of space.*

Special Prepaid Advertisements.

Twelve words and under; Sixpence; for every additional Three words or under, One Penny

FINE TESTED 1904 QUEENS, reared from selected workers. Hardy and prolific. 2s. 6d. each. Guaranteed healthy and safe arrival. WHITING, Valley Apiaries, Hundon, Clare, Suffolk. C 48

DRIVEN BEES FOR SALE What offers per lb.? Also Stocks Bees in Straw Skeps and Wooden Pails. J. WAYMAN, Cottenham, Cambridge. C 45

WANTED, a LADY'S CYCLE, light, free wheel. Will exchange Three Bar-Framed Hives, well stocked, healthy. Inspection invited. J. BOLT, 12, Church-street, Dunstable. C 44

QUEENS (Virgins and Fertiles) from 1s. each. Nuclei from 7s. 6d. DAWKINS, Sutton Coldfield.

WANTED at once, DRIVEN BEES, with Queen. State particulars. PRIESTLEY, Rishworth, Yorkshire. C 52

WANTED, offers for KODAK POCKET CAMERA. Cost 22s. Exchange Clover Honey, Italian Bees (Healthy), Pullets. O. COUTHURST, 6, Oak Bank-avenue, Blackley, Manchester.

FERTILE QUEENS, ready now, 3s. 6d., in introducing cages. Cheap STANDARD FRAMES WANTED, no saw-cut. Send sample and price. E. W. CARBINES, Cardinham, Cornwall. C 60

BEE AND POULTRY FARM, Freehold, 7 acres, FOR SALE, excellent house, garden, and outbuildings, 20 stocks, very healthy district. WHITFIELD, Bamfield, Medstead, Alresford, Hants. C 47

HEALTHY DRIVEN BEES. Ready for delivery at once, 5s. per lot, put on rail same day. W. D. T. RICHARDS, Postman, Kingswinford, Dudley, Worcs. C 56

EXTRACTOR (Little Wonder) FOR SALE, good condition, cheap. "ROWANLEA," Ashford, Kent. C 46

28TH YEAR. — RELIABLE QUEENS, 2s. 9d., Selected, 5s., in Introducing Cages, delivered. Small Swarms, 5s, 6d. on rail, cases free. ALSFORD, Expert, Haydon, Sherborne. C 59

EXTRACTOR, condition perfect, 14s. 6d., 1 cwt., Ripener, 8s. Bees on 4 frames of brood, 12s. 6d. Honey press, 4s. 6d. W. WOODS, Normandy, near Guildford. C 61

12 HEALTHY LOTS DRIVEN BEES FOR SALE, 3s. each if boxes are sent. COMLEY, Dynevor-place, Fairford, Glos. C 49

FERTILE QUEENS, 1904 tested, 3s.; very good strain. Cages free. STOPPARD, Grove Avenue, Chilwell, Nottingham. C 58

5 CWT. HONEY FOR SALE, in bulk, or in 2 or 3-lb. stone and glass jars. BLAKE, Barford, Salisbury. C 57

DRIVEN BEES from Strong Healthy Stocks, with Young Fertile Queens, 4s. 6d. Orders in rotation. W. SOLE, Expert, 105, Graham-road, Wimbledon. C 50

WANTED, DRIVEN BEES, 3 lots, 4 lb. each. QUILLIAM, Ballacain, Onchan, Isle of Man. C 54

BEES FOR SALE, 10 Stocks in Bar Frame Hives, and 10 doz. worked out Shallow Bars. Offers? ROGERS, Heath Apiary, St. Albans. C 55

NEW HONEY in 28-lb. tins, 50s. per cwt.; Sample 4d. Cash orders only. OWEN BROWNING, Apiarist, Ashley, Kingsomborne, Hants. C 52

BEE GLOVES (with gauntlets), new material, safe and sure, 2s. 6d. post free. GREENHILL, Graham-road, Wimbledon. C 2

DRIVEN BEES WANTED at earliest date possible. Price per lb. to MACDONALD, School House, Morish, Ballindalloch. C 38

6 NEW "W.B.C." HIVES, with frames, 15s. each. PARKES, Hooton Park, Cheshire. C 29

GUARANTEED good EXTRACTED HONEY, in 14 lb. tins and upwards. Sample 3d. DAVID HANCOX, Deddington, Oxon. C 37

ENGLISH MADE HONEY JARS. 1 lb. screw cap, 16s. 6d. per gross. JAS. DYSON, Stainforth, near Doncaster. C 4

Editorial, Notices, &c.

THE AUTUMN HONEY SHOWS.

In view of the rapidly diminishing list of "Shows to Come" in our columns, we venture to remind readers who are interested in shows as exhibitors that the date of closing entries for several autumn exhibitions is near at hand. Of the dozen or so shows for which entries can still be made by far the most important are the Trade Exhibitions and Markets, held at the Royal Agricultural Hall next month, followed by the "Dairy Show" at the same hall in October. Of these, the first, popularly known as the "Confectioners' and Bakers'," opens on September 3, and continues till the 10th; while the second, equally well known as the "Grocers'," begins on September 17, and closes on the 24th. Some particulars of these shows appear in our advertising pages of this issue, and fuller details of the numerous and exceptionally valuable money prizes offered for competition—nearly £100 in all—will be found in the schedules, now ready, and obtainable, post free, on application. Rarely has an opportunity occurred of securing valuable prizes in a season of comparative honey scarcity such as this, and we trust those who have a chance will take advantage of it by making an entry without delay.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of July, 1904, was £4,652.—From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

ROYAL LANCASHIRE AGRICULTURAL SOCIETY.

SHOW AT SOUTHPORT.

The above show, held on July 29 and three following days, was again a success, the attendance being very satisfactory. The Society provided for a big show by offering liberal prizes and medals in the honey department.

The display of honey was very satisfactory considering the untoward honey season in Lancashire this year. The trophies made a splendid show of themselves, and the other classes also made a good and interesting show.

The Rev. T. J. Evans, Tarvin Vicarage, Chester, and Mr. J. Gray, Long Eaton, officiated as judges of the exhibits, and made the following awards:—

OPEN CLASSES.

Trophy of Honey.—1st (£3), J. Pearman, Derby; 2nd (£2), Geo. Rose, Liverpool; 3rd (£1 10s.), Jas. Jones, Wegber Quarry, Carnforth.

Twelve 1-lb Sections. — 1st (£2 and B.B.K.A. silver medal), A. W. Weatherhogg, Willoughton, Lincoln; 2nd (£1), W. Woodley, Beedon, Newbury; 3rd (10s.), W. Patchett, Caistor, Lincs.

Twelve 1-lb. Jars Extracted Honey.—1st (£2 and B.B.K.A. bronze medal), W. Patchett; 2nd (£1), Fred. Powers, Andover; 3rd (10s.), T. S. Holdsworth, Kirton Lindsey, Lincs.

Twelve 1-lb. Jars Medium-Coloured Extracted Honey.—1st (£1), John Helme, Weobley, Herts; 2nd (10s.), Jas. Jones; 3rd (5s.), T. S. Holdsworth.

Two Frames of Comb Honey for Extracting. — 1st (£1), J. Stirzaker, Poulton-le-Fylde; 2nd (10s.), Geo. M. Tune, Llangollen.

Twelve 1-lb. Jars Granulated Honey.—1st (15s.), T. S. Holdsworth; 2nd (10s.), J. Helme; 3rd (5s.), R. Brown, Somersham.

Twelve 1-lb. Sections Heather Honey.—1st (£1), Wm. Dixon, Beckitt-street, Leeds; 2nd (10s.), J. M. Balmbra, Alnwick; 3rd (5s.), T. Walker, Hawkshead.

Bees Wax in Suitable Form for Shop Sale.—1st (15s.), Mrs. F. Harris, Sibsey, Boston, Lincs.; 2nd (10s.), J. Pearman; 3rd (5s.), Rev. J. Kemp, St. Veryan Vicarage, Cornwall.

Exhibit of Confectionery, &c., in which Honey is Used.—1st (£1 10s.), A. S. Dell, Leigh, Lancs.; 2nd (15s.), J. Pearman; 3rd (10s.), W. Dixon.

Display of Cut Flowers Visited by Bees.—1st (£1), R. Cooper, St. Helens; 2nd (15s.), Geo. Rose; 3rd (10s.), Geo. Rose.

COUNTY CLASSES.

Trophy of Honey. — 1st (£2 10s. and Society's silver medal), Geo. Rose; 2nd (£1 10s.), Geo. Rose; 3rd (£1), A. S. Dell.

Twelve 1-lb. Sections.—1st (£1 10s.) Robt. Rymer, Hesketh Bank; 2nd (10s.), Jas. Jones.

Twelve 1-lb. Jars Extracted Honey.—1st (£1 10s. and L.B.K.A. silver medal), Wm. Cookson, Hesketh Bank, Preston; 2nd (10s. and L.B.K.A. bronze medal), Robt. Rymer, Hesketh Bank; 3rd (5s.), J. Stopford Taylor, Bickerstaffe, Lancs.

Frame-Hive Made by an Amateur.—1st (£1 10s.), J. Hale, Croston; 2nd (£1), Frank Lowe, Rainhill.

The Champion Prize for the Best Exhibit of Honey in the Show.—The Lancs. Agricultural Society's silver medal was awarded to J. Pearman, Derby, for his trophy of honey.—(*Communicated.*)

Exhibit of a Practical or Instructive Nature.—1st (£1 10s.), Geo. Rose; 2nd (£1), Geo. Rose; 3rd (10s.), Wm. Dixon.

NORTHANTS B.K.A.

ANNUAL SHOW.

The annual show was held on August 4 in connection with that of the Kingsthorpe Horticultural Society, in Kingsthorpe Park. Over 100 exhibits were staged in the honey section, besides several supers not for competition, which, considering the poor season in this district, was very satisfactory. Mr. J. Herrod, Sutton-on-Trent, judged the exhibits, and afterwards gave demonstrations in the bee-tent, which were listened to with much attention. Unfortunately, a thunderstorm came on during the day, and kept many from visiting the show. The following are the awards:—

Twelve 1-lb. Sections. — 1st, Geo. Page, Holcot; 2nd, Jas. Adams, West Haddon; 3rd, Richard Allen, Tusmere; 4th, G. S. Pilgrim, Hardingstone.

Twelve 1-lb. Jars (Light) Extracted Honey. — 1st, Jas. Adams; 2nd, Chas. Wells, Oxenden; 3rd, Geo. Page; 4th, H. England, Overstone.

Twelve 1-lb. Jars (Dark) Extracted Honey. — 1st, Chas. Wells; 2nd, Geo. Page; 3rd, Jas. Adams.

Six 1-lb. Jars Granulated Honey. — 1st W. T. Munn, Northampton; 2nd, J. Adams; 3rd, W. Manning, Northampton.

Three Shallow-frames Comb Honey.—1st, J. Adams; 2nd, J. Bubb, Bugbrook; 3rd, W. Manning; 4th, T. Norman.

Beeswax (not under 1-lb.). — 1st, C. Wells; 2nd, Mrs. Bubb; 3rd, C. J. Burnett; 4th, R. Allen.

NON-PREVIOUS WINNERS CLASSES.

Six 1-lb. Sections.—1st, R. Allen; 2nd, C. J. Bennett; 3rd, H. England.

Six 1-lb. Jars Extracted Honey. — 1st, G. Odell, Roade; 2nd, E. E. Twigge, Rushden; 3rd, Mrs. Bubb; h.c., C. J. Burnett.

Super of Comb-Honey. — 1st, H. England; 2nd, W. Allen, Kingsthorpe; 3rd, T. Norman.

SPECIAL PRIZES IN OPEN CLASSES WITH FREE ENTRY.

Single 1-lb. Jar Extracted Honey.—1st, C. Cox, Brampton; 2nd, W. Patchett, Cabourne, Lincs.; 3rd, Mrs. Cox; 4th, T. S. Holdsworth, Kirton Lindsey; 5th, S. Soal, Rochford; v.h.c., T. Hammond, Great Totham; h.c., T. G. Hillier, W. F. Fake, and S. J. Mayer.

Single 1-lb. Jar Extracted Honey (Workhouse Class). — 1st, C. Cox; 2nd, T. S. Holdsworth; 3rd, W. Patchett; 4th, W. T. Cook, Binbrook.

Honey Cake.—1st, Mrs. Burnett; 2nd, Mrs. Bubb; 3rd, Mrs. Sharman; 4th, Miss Florrie Munn.

HIVES.

Hive Suitable for Cottagers.—1st, C. L. Greenhill, Wimbledon; 2nd, W. P. Meadows, Syston.

HARTLEPOOLS AND DISTRICT B.K.A.

ANNUAL SHOW.

The annual show of the above association was held, in connection with the Allotments Association, on the Vicarage Grounds, West Hartlepool, on August 3. There was a good display of honey of excellent quality, which was judged by Mr. A. Bains, West Hartlepool, who made the following awards:—

Four 1-lb. Sections.—1st, W. F. Burkill, West Hartlepool; 2nd, H. E. Clarkson, West Hartlepool; 3rd, J. Stainscliffe, West Hartlepool.

Four 1-lb. Jars Extracted Honey.—1st, W. F. Burkill; 2nd, H. E. Clarkson; 3rd, T. Stainscliffe, West Hartlepool.

Three Shallow-Frames Comb Honey.—1st, T. Stainscliffe; 2nd, M. Todd, West Hartlepool; 3rd, J. Stainscliffe, West Hartlepool.—W. F. BURKILL, hon. sec.

NORTH NORFOLK B.K.A.

ANNUAL SHOW.

The annual show was held on August 1 in Melton Constable Park, by permission of Lord Hastings, in conjunction with that of the Agricultural and Horticultural Society. The weather was perfect, and there was a large attendance of the public, many taking a deep interest in the exhibits, and also in the bee-demonstrations given by the hon. sec. and expert. The honey staged, both in quantity and quality, was not equal to that of last year, especially with regard to colour, dark honey being so prevalent this season. Messrs. J. H. Pearson and H. G. Oclee judged the exhibits, and made the following awards:—

MEMBERS' CLASSES.

Twelve 1-lb. Sections.—1st, O. Goddard, Reepham; 2nd, J. Mayer, Hemblington; 3rd, W. Towler, Edgefield.

Twelve 1-lb. Jars Extracted Honey.—1st, J. D. Softley; Massingham; 2nd, J. Mayer; 3rd, O. Goddard.

Six 1-lb. Sections.—1st, J. Nicholls, Shipdham; 2nd, Miss M. C. Beck, Harpley; 3rd, W. Towler.

Six 1-lb. Jars Extracted Honey.—1st, J. D. Softley; 2nd, J. Carr, Briston; 3rd, O. Goddard, Reepham.

Beeswax.—1st, J. Nicholls; 2nd, W. Fake, Massingham; 3rd, J. Platten, Briston. Five-guinea challenge cup, J. D. Softley.

OPEN CLASSES.

Twelve 1-lb. Sections.—1st, not awarded; 2nd, W. J. Norman, Harpley.

Twelve 1-lb. Jars Extracted Honey.—1st, W. J. Norman; 2nd, W. Fake.

Single 1-lb. Jar Extracted Honey.—1st, H. W. Woolsey, Edgefield; 2nd, J.

Smalls, jun., North Creake; 3rd, W. Fake; 4th, G. W. Woolsey, Edgefield.

Single 1-lb. Section.—1st, W. Fake; 2nd, W. J. Norman; 3rd, J. Mayer, Hemblington; 4th, S. Mayer, sen., Hemblington.

Bee-Driving Competition.—1st, J. Platten; 2nd, A. Chesney, Bale.—C. J. COOKE, Hon. Sec.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "THE EDITORS of the 'British Bee Journal,' 10, *Buckingham-street, Strand, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 10, *Buckingham-street, Strand, London, W.C.*"

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[5607.] *The Honey Season.*—It is very gratifying for us Southrons to read friend "D. M. M.'s" par on page 303, headed "A Superb Mouth," describing the good time our bee-brethren in the North have had during the month of July. For myself, I hope they will have a continuance in August, or while the heather harvest lasts, so that the two past poorer years will be eclipsed by the memory of a real good season, such as will make bee-keeping ayont the Tweed "hum" again, as in days of yore.

In some parts of the South of England, judging by reports to hand, nearly every day it appears that the season has been a good breeding time, hives teeming with bees even up to date of writing, yet the average "take" of surplus in some parts will not exceed 20 lb. section honey per hive; in others about 30 lb. of extracted honey per stock. One correspondent writes: "Honey scarce in my district. I have nearly sold out all my honey at 10d. for unglazed sections and 1s. each for those glazed; extracted honey at 1s. per 1-lb. jar." These prices are as they should be; yet we have a purveyor here in Newbury who is selling unglazed sections at 8d. each, and this, too, while we are told that very little honey has been produced in and around Newbury this season.

The Foul Brood Question.—Referring to the question of inspectors' visits to clean, healthy apiaries after they had possibly overhauled a foul-broody apiary a few miles away, I ask, Would the "inspector" disinfect himself and his appliances before inspecting, say, my healthy apiary? Or am I to take the almost certain risk of his introduction of infection if he fails in this? Mr. J. Herrod (5591, page 293) gives a dark side of the picture of bee-keeping in declaring that in his expert tours he has found marked symptoms of foul brood in hive after hive for days at a stretch; and "Nondescript," on the same page, tells of an apiary of sixty hives becoming "nearly rotten" in a few weeks. The expert tours, from which so much was expected when they first began twenty years ago, appear from all this to have been practically useless so far as the healthiness of bees and the progress of bee-keeping is concerned. It makes one wonder if the power to destroy these widely spread diseased apiaries leaves the course clean for the healthy and prosperous hives to arise, Phœnix-like, from the ashes of their predecessors. Thirteen years of active work and vigilance have not cleared foul brood out of a single province in Canada, although the inspector, when curing a stock, has allowed the bees to build new combs for two or three days, then taken the combs away, and again started them on foundation. This is a full equivalent to confining them forty-eight hours, as suggested by Mr. Saunders on page 274.

Grading Sections.—This should be done in sending away every consignment of honey. Each separate dozen should be of one grade in the parcel, all inferior or imperfectly-sealed sections being weeded out. Every particle of wax and propolis must be scraped off, and all sections for selling over the counter should be glazed singly or put in cases or "cartons." By this means comb honey is preserved from dust and damage by insects, and the trader will always send repeat orders to the same apiary if sent in good marketable form.

Robbing.—As we near the end of our honey season and the time for removing surplus from hives, do not neglect to contract entrances to $1\frac{1}{2}$ in. or 2 in., according to the strength of each colony; this gives the bees a better chance to withstand robbers. Also, when taking off supers, do it, if possible, in the evening, and be careful to replace the quilts and wraps so as to cover the frames. A carbolised cloth spread on the frames will drive the bees down so that the quilt can be laid on in its place without killing a bee, and without upsetting the bees to the annoyance of neighbours.—W. WOODLEY, Beedon, Newbury.

FOUL BROOD LEGISLATION.

[5608.] The numerous letters upon this question in the B.B.J. make it clear that the writers take sides, either with those experienced in dealing with foul brood, or with those whose practical experience of it is *nil*. If Mr. W. J. Farmer had admitted at the outset that he belonged to the latter class we could understand his attitude on the question, for it is quite clear that he seems unable to appreciate the importance to apiculture of the subject under discussion. If Mr. Farmer cannot believe that foul brood is generally prevalent, he could have ocular demonstration of the fact beyond dispute by leaving the bliss of his own apiary for a few hours under the guidance of one like myself, who knows only too well that the disease is prevalent. "Compulsion" is, as Mr. Farmer says, an ugly word; but is "grin and bear it" a less ugly phrase? This is what many of us have had to do. Unfortunately, cleanliness and watchfulness will *not* keep foul brood at bay, as many know to their cost, when an outbreak of the disease occurs in the neighbourhood. The better his own bee-keeping, the more likely Mr. Farmer would be to suffer by the carelessness of others.

Mr. Wm. Woodley, whose "Bee Notes" I have read for five-and-twenty years or so, has always endeavoured to do what is best for apiculture as a whole, and those who know Mr. Woodley best feel that he only needs convincing that bee-keeping is suffering serious loss because voluntary effort to deal with foul brood has failed, and that he will then freely vote for what is best for the greatest number. Mr. Woodley has been exceedingly fortunate in escaping the loss so many have suffered from through foul brood during all the years over which his bee-keeping has extended. I suppose we must take for granted that Mr. Woodley has never had an outbreak of foul brood among his bees, otherwise he would hardly quote reports from Canada and America when referring to the subject. In most of such reports as I have read there is a very noticeable lack of thoroughness, that makes it inadvisable to rely upon either American or Canadian methods of dealing with this disease.

Foul brood first came under my notice fifteen years ago, and since that time I have, so far as circumstances allow, made the disease a special subject of study. I gladly did my little best when the B.B.K.A. prepared their Bill of ten years ago. This was not much, but our M.P. promised me then that he would support the Bill when it was brought forward. I usually make a number of journeys from home on bee-work, and this season, to my regret, I have to tell that I have found as many stocks diseased as I usually come across in five years. The time that I am able to give to bee-work has been almost entirely taken up this year in dealing with bad outbreaks of foul brood.

I have now another infected apiary to deal with, and would gladly avoid the work if it were possible, so altogether unpleasant is it. But heavy and disagreeable as the work is, I find that the "unreasonable neighbour" is the worst part of it. In each of the several outbreaks that I have come across this year, the unreasonable neighbour who refused to have infected stocks treated has cropped up, though he, before anyone else, would benefit by the bees being got into a healthy condition. No doubt ignorance is sometimes the cause of such action, but many absolutely refuse to be enlightened. As the years pass, it becomes to me more evident that we cannot do without compulsory powers. Voluntary effort has had a long trial, and a fair trial, and has been killed by the disease known as selfishness. Are persevering bee-keepers to be required to go on year after year destroying stocks of bees and bee-keeping appliances, or give up the pursuit? In other words, are the owners of infected stocks to be allowed to continue in their obstinate and unneighbourly conduct for all time? I have this spring seen cartloads of valuable bee-keeping appliances, many of them almost new, destroyed by burning. Yet even this evidence, accompanied though it was by everything known to neighbourly diplomacy, was insufficient to shake the obstinacy of unreasonable owners of infected stocks in adjoining apiaries.—W. Loveday, Hatfield Heath, Harlow.

DEALING WITH FOUL BROOD.

A TRAVELLING EXPERT'S METHODS.

[5609.] As a travelling expert, engaged by various county B.K. associations for "touring" work, I give the following facts for what they are worth. While travelling Lincolnshire I visited a bee-keeper who utterly failed in keeping his apiary of forty stocks free from foul brood, owing to a near neighbour, who would not take any trouble in clearing out disease from among his bees.

In Cheshire we had a bee-keeper living some time ago who during his lifetime would not, or could not, get rid of disease in his apiary of twelve stocks. These latter were sold by auction after the owner died to five different persons residing in as many districts of the county. Four of these lots were dealt with on my visit the next season.

Three of the above-named stocks were treated as follows:—Just at swarming-

time the bees were shaken direct on to frames fitted with full sheets of foundation; the whole contents of the brood-nests were then burnt and the ashes buried. Result, no further trace of disease.

I also treated an apiary of eight diseased stocks as follows:—Five clean frame-hives were prepared with full sheets of foundation, and bees of the eight stocks were shaken direct into the five clean hives, thus making five from eight stocks. All contents of old brood-nests burnt and buried as before, and the old hives cleansed and disinfected. Result, next year only three cells were found containing foul brood, which were treated with carbolic; the third season showing no trace of disease.

Seeing, then, that a strong stock only loses the combs of its brood-nest—which latter is already past recovery—I ask, Where does even a 5s. value come in for such a stock? On the other hand, if you admit a 10s. value per stock, it will pay the bee-keeper vastly well to call in the inspector and get 10s. each for stocks either entirely valueless or no bigger than nuclei. I certainly agree with Col. Walker that no compensation should be paid.

I also greatly approve of his argument that a qualified bee-keeper should be left to work out his own cure among his own bees, so long as he did it in a reasonable time.

I also ask, Why should "bee products" not be allowed to be removed? Beeswax, I understand, is perfectly sterilised in making it into foundation by the "Weed" process, while honey from diseased hives is known to be quite good for human consumption. Besides, many cases of foul brood are dealt with that are not severe or difficult of cure. A lady apiarist in Cumberland I know of extracted some nice clear honey from a diseased stock, and sold the same; she also extracted the wax and cleansed the frames, and effected a cure. This sort of case should cause us to make any Foul Brood Bill as broad as possible.

I suggest that the usual visiting slip on experts' books should be marked "Technical Instruction," and that the County Council should assist the same way that they do with "Garden Allotment Lectures," by giving "technical instruction" on foul brood on the spot, the only difference being, one has to be done singly, the other in an allotment garden.

I consider it most important that the expert or inspector should be looked upon as a friend, not one whom bee-keepers dread to see enter their apiary, fearing that he would condemn wholesale everything he saw in the shape of brood as foul. Bear in mind, we have "chilled brood," a "failing queen's brood," an "unfertile queen's brood," and the genuine foul brood.

My experience points to the fact that counties where the B.K. Association has had a competent travelling expert regularly employed have only a few cases that would need the pressure of the law.

In travelling through Lancashire this year I have only had two cases of foul brood not dealt with, and these were owing to the absence from home of their owners. One lot dealt with were going to be sold under the hammer, owing to death of owner. In another apiary of five stocks, the person was found to be entirely ignorant of the nature of foul brood. What is needed most is County Council authority for giving the expert time to take off his coat and offer practical help to the bee-keeper found in a plight, yet willing to make a bonfire of his rotten combs.

I consider we should instruct bee-keepers on the following easily understood points:—If you find a sealed cell in an empty comb, open it; if a dead bee is found in the imago stage you have only a chilled bee, but if you find a mouldy pupa, then rest content, as the germs of mould will not work in the same cell as the germs of foul brood.

If you find the cell apparently empty, with nothing left but a dried up brown scale at the bottom, then have a care; while this cell was sealed it was safe, but open this cell and allow it to be filled with honey, and the bees may possibly use hundreds of cells round it for brood, and there may be no disease; but should the honey from this single cell, saturated with spores of foul brood, be used as food for the larvæ, then the disease is fed back to the brood right and left. The point, therefore, is to fill the cell with carbolic acid when the brown scale is found, and by so doing you burn out the germs of disease, on the same principle that the germs of hydrophobia are destroyed after the bite of a dog.

It is the newly formed or badly worked county associations, where no qualified experts are employed, along with the new members in old associations, that cause the heavy percentage of disease in many counties. The Government leaflet (No. 32) on foul brood has done useful work in spreading light on the subject.

As a rule, the older members do their best to keep the bees clear of disease, with very few exceptions, but these exceptions often spoil the finest districts, and it is these whom the law seeks to deal with, and they themselves would be gainers in the end, even without compensation.

During the past week I have destroyed

the brood-nests of two stocks in Notts County belonging to members and one stock owned by a non-member. This would have meant 30s. compensation; but instead of the members referred to desiring compensation, they were only too glad to get rid of foul brood. In the case of the non-member, he simply asked me to look at the one suspected stock; and now in view of risks to his other eight hives, he may be glad to rejoin the Notts B.K.A., and be certain of help and advice when needed.

Efficient expert work can be done if one man is employed in each county. This makes the position worth a man putting his energy into the task as a "business" very different to a half-fledged expert taking on the task for a week's holiday, and then rushing it. The "picnic" feeling wears off after the first week, and you realise that there is some hard work to do, and that you are earning your living. If the counties were divided into centres, and the expert commenced No. 1 centre in 1904 and No. 2 centre in 1905, it gives a chance to vary the advice asked at his hands about different places, and makes efficient bee-keepers all round. Again, who so well able to give advice by post as the expert who knows exactly the man and his locality?—J. Gray, Expert B.B.K.A., Long Eaton, Derbyshire.

OVERHAULING HIVES.

RISKS OF COMPULSORY INSPECTION.

[5610.] May I endorse the remarks of your contributors W. Woodley and W. J. Farmer in recent issues of the Bee Journal as to pulling about hives piled up with supers? Those bee-keepers who seldom have more than one or two surplus chambers on at a time would perhaps not be inconvenienced very much, but with as many as four or five tiers of supers on at a time, and all packed full of bees, the result of an examination of the brood-nest would be highly injurious, and the labour and time involved would be simply enormous, to say nothing of the risk of uproar that might easily occur in an apiary of 200 hives. Most certainly this possible upset should not be legally permissible.

The present promoters of foul brood legislation do not appear to have realised the great difficulties in the way of drawing up a workable Bill. To my mind there is no subject on which it is more difficult, or almost impossible, to legislate, and I consider the Bill now before us is full of defects. I send name for reference, and sign,—"Cornwall." August 2.

WEATHER REPORT.

Westbourne, Sussex,
July, 1904.

Rainfall, 2·07 in.	Minimum on grass, 36° on 21st.
Heaviest fall, ·66 on 30th.	Frosty nights, 0.
Rain fell on 9 days.	Mean maximum, 71·2.
Below average, ·44 in.	Mean minimum, 55·4.
Sunshine, 270·3 hours.	Mean temperature, 63·3.
Brightest day, 11th, 15 hours.	Above average, 3·0.
Sunless days, 1.	Maximum barometer, 30·32 on 8th.
Above average, 38·2 hours.	Minimum barometer, 29·65 on 26th.
Maximum temperature, 80° on 17th.	
Minimum temperature, 48° on 1st and 22nd.	

L. B. Birkett.

Queries and Replies.

[3513.] *Removing Sections from Skeps in August.*—On June 1 I had a strong first swarm of bees, which I put in a straw hive already full of comb. I fed them for the first three weeks, and on July 10 put on a rack of twelve 1-lb. sections. Will it be advisable to take the honey if they fill the sections? It has been a good time here of late for the bees, fine sunny weather for six weeks past, and now the ling is coming into bloom within 1½ miles of my hives. I shall be glad of an answer through the British Bee Journal. I am only an amateur bee-keeper, and find much useful information in its columns. I send name, etc., and sign myself—"Cartwright," Derby.

Reply.—By all means remove the sections when filled and sealed over, as, no doubt, they will be if the heather yields well. After taking off the sections it will be advisable to cover the skep down and allow the bees to store all they gather from the heather later on in the skep for winter food.

[3514.] *Bees Refusing to Nurse Brood.*—In removing a month-old swarm in straw skep (about two miles), some of the combs containing brood broke away. I, however, managed to fasten the broken comb in another straw skep, and placed it on top of a frame-hive. Part of the broken comb I also placed on top of a skep, and covered it with another skep for protection. My view in doing this was to see whether the bees would hatch out the brood in the broken combs removed from the full skep, this latter being too crowded with bees and combs for me to conveniently return to it the broken-off comb. The result of my action was, the bees in frame-hive and

the straw skep pulled out (alive) the grubs, larvæ, and young bees, and killed them. In the "Guide Book" I see it recommends alternating combs in frame-hives when uniting bees; would not the same thing happen as in my case? Thanking you in anticipation, I send name and sign—"ANXIOUS," Hatherleigh.

REPLY.—1. It is difficult to say why bees, at times, act as stated, but they do occasionally. An experienced bee-keeper, however, would quite naturally have given the brood back to the stock from whence it was taken for hatching-out. 2. No, the cases are different. Besides, when uniting bees in frame hives, the bees of both lots are dusted with flour as a preventive of any such trouble as occurred in your case.

[3515.] *Driving Bees and Removing Combs from Below Stand.*—I hope you will pardon me again troubling you with the following questions:—1. I am offered some bees in straw skeps, if I like to drive them. They, however, have built some comb—a lot of it—beneath the hive. It hangs down about a foot between the floor of hive and its support. How shall I proceed to drive them? 2. How soon in the year can bees be driven? Would not a colony, in the condition mentioned above, be ready to drive any time? 3. I have some frames of comb by me containing honey. Would it not be best, when hiving driven bees, to place some of these combs in hive, as they are, without extracting the honey from them? With thanks for previous replies, I enclose card, and sign—"PROBATIONER," Worcester.

REPLY.—1 and 2. The bees have probably been induced to build combs below their stand owing to some chink or aperture in the hive floor. Before driving, you should first find out, by smoking the bees aside, if the queen is using the outside combs for brood. If no brood is seen, the combs referred to may be left till the bees are driven, then set the skep containing them on its stand, and, after smoking, cut away the combs below, one by one, and as removed brush the bees off and let them run into the skep. With regard to best time for driving, some extra care must be taken not to start robbing by other bees when cutting away the combs below hive stand, especially if the latter contain honey. 3. Use the built-out combs as they are when hiving the driven bees.

[3516.] *Queen Excluders and Shallow-Frames.*—Would you advise me on following case, for which I do not see directions in your "Guide Book"? I want to take three hives on to the heather. The shallow-frame supers now above brood-chambers contain honey, eggs, and capped brood cells. The racks of sections on top are full of honey, and these, of course, I can take off; but must I leave on the shallow-frames?—M. P., Hexham, August 3.

REPLY.—When giving shallow-frames for surplus honey it is a mistake to omit the use of queen excluders between super and brood-chambers, as advised in "Guide Book." For the rest, we must say, if there is no drone-brood in the supers we should put on excluders, if latter are already on hand. Without them the queen will probably go on breeding in the shallow-frames, and thus reduce your crop of heather honey; but if the queens are got below and kept there, the flower honey now in surplus-chambers might be extracted and the combs refilled with heather honey.

[3517.] *Driven Bees Destroyed in Transit.*—As a subscriber for some years past to your interesting journal, I should be glad of your advice. I purchased recently two lots of driven bees from an advertiser in the B.B.J. They were promptly delivered by the railway company. To my surprise, however, I found there were not fifty bees of the whole surviving. The dead bees emitted an intolerable stench, and were apparently all glued together in the bottom of the box, dead of suffocation. The only ventilation in package was a piece of perforated zinc 12 in. by 3 in. in the top of the box, and four 1 in. centre-bit holes half-way down—no bottom ventilation whatsoever. Having regard to the cruelty of thus confining bees at our present temperature, and the reckless manner of packing, have I any reasonable chance of substantiating a claim against the vendor, as I feel very strongly inclined to take action in a matter of some considerable importance to bee-keepers in general? Awaiting the favour of your reply, I send name and sign—W. G. T., Southend, August 5.

P.S.—I may say that according to the vendor's advices the bees were only confined from one evening to the next afternoon.

REPLY.—We never advise recourse to "law" in these cases. Far better effect a compromise, if possible. If this fails, the County Court judge is the only one capable of judging fairly after hearing the evidence on all sides, including that on behalf of the railway company.

[3518.] *Metal Covers for Hive Roofs.*—Will you kindly give me your opinion on, as compared with zinc, corrugated iron and zinc sheeting for hive roofs? I know the iron will absorb heat in hot weather, but I think the corrugations will allow of a current of air passing between the iron and wood of roofs, and thus keeping the wood cool. On the other hand, would zinc

be as good if, as a substitute for corrugations, strips of wood are put between the sheet of zinc and wood of roof? This would allow the air to pass between hive top and zinc. I think I have read in B.B.J. about putting felt under the zinc, but do not know for what reason it was put. Awaiting your reply in B.B.J., I send name and sign—J. J. H., Durham, August 4.

REPLY.—There is no more efficient cover for hive roofs than either corrugated iron or zinc, and if used as stated, zinc is as good as iron, while less expensive and lighter. No doubt the felt mentioned as placed below zinc was intended to serve as a non-conducting material.

[3519.] *Transferring Bees in Autumn.*—I should be very glad if you would advise me as to the management of my bees this coming autumn. I started bee-keeping with a swarm in a skep in July, 1903. This year a very strong swarm issued from my skep on June 23, and a second swarm or "cast" on July 6. Both the stock and the swarm, therefore, are now in straw skeps. I want to know if it would do to unite the stock and the cast, and I thought of putting them in a frame-hive when united. This makes me ask: 1. When would be the best time to drive the bees, now or later on in the autumn? 2. Should I kill one of the queens when uniting, or let them settle that between themselves? 3. Would it be advisable to spray the bees with scented syrup when joining the two lots? I have had no practice whatever in "driving," but I hived the swarm and the cast quite successfully. I am always interested in the B.B.J., and have learnt much by reading it. I enclose name, etc., and sign—"NOVICE," Wolverhampton, August 3.

REPLY.—Instead of replying seriatim to the queries enumerated, we would say a word on the general question of giving up skeps and adopting the frame-hive, along with modern methods of bee-keeping. In doing this, our first advice is to procure a copy of the "Guide Book," and by careful reading inform yourself fully about such operations as driving and uniting bees, along with the best methods of transferring from skeps to frame-hives. You will find that the best time for transferring bees from skeps to frame-hives is in the spring, while late in the autumn is the very worst. In your case, to drive the bees from their present comfortable homes and put them into empty frame-hives, with combs to build out and furnish with winter stores, might easily end in your being left bee-less next spring, instead of having two stocks to start the year with, and on the whole, we think this general reply will be more useful than answering the various queries put.

[3520.] *Dealing with Brood in Supers.*—I take the liberty of asking what you would advise me to do under the following circumstances:—Early in the season I united two stocks of bees (one of which was queenless), at same time putting on a crate of shallow-frames with drawn-out combs, but no excluder zinc underneath. The bees immediately took possession, and filled six of the frames with honey, but in the four centre frames when last examined there was a good deal of sealed brood. The six frames of honey are sealed, and I think of removing them and putting in frames of foundation on both sides of those containing brood, then put the crate of shallow-frames underneath the body-box until the end of the season. If the above course is not advisable, would you kindly say in your first issue what I should do in preference? Thanking you for past favours, I send name and sign—X. V., Argyll.

REPLY.—It is a great mistake to use boxes of shallow-frames as supers without excluder zinc between super and body-box. The queen is almost certain to ascend and start breeding without this precaution is taken. In your case, we advise leaving the shallow-frames above the body-box, and if there is no drone-brood in the shallow-frames, would put a queen excluder between super and brood chamber. Then extract the frames of sealed honey and replace them when emptied (in lieu of those containing foundation) for refilling.

Echoes from the Hives.

Bovey Tracey, Devon, August 8.—I took a ramble over the moors on the borders of Dartmoor one day this week, and being interested in bees, took particular notice of the heather. I find the cross-leaved heather (E. tetralix) is not so fine this year as it is sometimes, but the bees were busy on it, though not gathering any pollen that I saw. The bell-heather was also in bloom, but I saw no bees touching that. The ling, however, is just coming out, and the bees were rapidly loading up with pollen from that, as well as gathering honey. I also noticed a lot of "dodder" entwining around the heather and furse; the bees were gathering as freely from this as from the heather. I was not previously aware that "dodder" was a bee-plant, but I find the little pink blossom very sweet smelling. Honey has not been very plentiful here this season. Bees did very little until the clover bloomed; that was only of short duration, owing to the dry weather.—A. GODSLAND.

Bee Shows to Come.

August 13, at Lancaster.—Show of Honey, &c., in connection with the Lancaster Agricultural Society's Annual Show. **Entries closed.**

August 13, at Burry Port.—Honey Show in connection with the Burry Port Horticultural Society, South Wales. **Entries closed.**

August 13, at Hawkshead, Lancashire.—Honey Show in connection with Flower Show. Six classes. Also two medals offered by the Lancs. B.K.A. Schedules from A. Hargreaves, Hon. Sec., Hawkshead.

August 17, at Radstock, Bath.—Honey Show in connection with the Radstock and District Horticultural Association. **Entries closed.**

August 17 and 18, in "The Quarry," Shrewsbury.—Annual Show of the Shropshire B.K.A. in connection with the Shrewsbury Great Floral Fête. **Entries closed.**

August 24, at Fleetwood.—Honey Show in connection with Fleetwood Floral and Horticultural Society. Open classes for Six 1-lb. Sections. Six 1-lb. Jars Light Extracted Honey, and Six 1-lb. Jars Dark Extracted Honey. Schedules from Edward Cook, Hon. Sec., Rossall Grange Farm, Fleetwood. **Entries close August 14.**

August 24, at Sandbach.—Honey Department of the Cheshire Agricultural Society's Show, under the management of the Cheshire B.K.A. Open classes for Hives, Sections, and Extracted Honey. Substantial prizes. Bee Lectures and Demonstrations on the showground.

August 24, at Bradford Abbas, Dorset.—Annual Show of the Yetminster and District B.K.A. in the old Vicarage ground. Three open classes, including three 1-lb. jars extracted honey and three 1-lb. sections. Schedules (with entry form) from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne, Dorset. **Entries close August 20.**

August 24, at Reading.—Honey Show of the Berks B.K.A., in conjunction with the Annual Exhibition of the Reading Horticultural Society. Open classes for comb honey in sections and for extracted honey. Local classes include prizes of 20s., 15s., 10s., and 5s. for honey trophy. Also classes for owners of small apiaries. Schedules from D. W. Bishop-Ackerman, Hon. Sec. Berks B.K.A., 131, King's-road, Reading. **Entries close August 21.**

August 24 and 25, at Leamington.—Annual Show of the Warwickshire B.K.A. in connection with that of the Warwickshire Agricultural Society. Schedules from James Noble Bower, Hon. Sec., Warwickshire B.K.A., Knowle.

August 25, at Llangollen.—In connection with the Sixth Annual Flower Show. Open classes for Six 1-lb. Sections, Six Jars Extracted Honey, and Beeswax. Schedules from Frank Little, Brook Bank, Llangollen. **Entries close August 11.**

August 25, at Montgomery.—Montgomery and District Horticultural Society. Open classes for honey, six 1-lb. sections and six 1-lb. jars extracted honey. Prizes 10s., 5s., 2s. 6d. Entrance fee 1s. each class. Many open classes, flowers, fruit, vegetables. For schedules, apply Mr. W. Jones, Secretary. **Entries close August 18.**

August 27.—Twelfth Annual Show of the South of Scotland Bee-keepers' Association. Five open classes for extracted and comb-honey and wax. Schedule and entry form from Hon. Sec., S. M'Vie, Essex Park Cottage, Dumfries. **Entries close August 20.**

August 27, at Barnton, Northwich.—In connection with the Barnton Horticultural Society. Six local classes, and classes open to the county, and members of the Cheshire B.K.A. for twelve 1-lb. jars extracted honey, and for 1-lb. beeswax. The C.B.K.A. give their silver medal to winner of first prize for twelve jars of honey. Schedules from Mr. S. Wade, Barnton, Northwich. **Entries close August 20.**

August 30, at Cartmel, Lancashire.—Honey show in connection with the 32nd Annual Show of the Cartmel Agricultural Society. Three open classes for Comb and Extracted Honey (prizes, 15s., 10s., 5s., and 2s. 6d.), and Beeswax (prizes, 10s. and 5s.), along with silver and bronze medals of the Lancs B.K.A. Schedules from W. Cragg, Secretary, Cartmel, viâ Carnforth. **Entries close August 18.**

September 3 to 10 at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders' (12th) Annual Exhibition and Market. Numerous classes and liberal prizes for comb and extracted honey and beeswax. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad-street, London, E.C.

September 17 to 24, at the Agricultural Hall, London.—Honey Show in connection with the twelfth Annual Exhibition and Market of the Grocery and Kindred Trades. Numerous classes and liberal prizes for comb and extracted honey and beeswax. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad-street, London, E.C.

Special Notice.—In connection with above Shows there will be a *Working Exhibit* illustrative of modern Bee-keeping and Honey-production, including *Demonstrations* with *Live Bees* and extracting honey from combs for sale by skilled experts. (See large advt. p. v.)

September 14 and 15, in Waverley Market, Edinburgh.—Eleventh Exhibition of the Midlothian B.K.A. in connection with that of the Caledonian Horticultural Society. Twenty-four classes, with good prizes, for honey and beeswax, including seven open classes (three prizes in each). Schedules from W. Reid, Secretary, Heriot, Midlothian. **Entries close September 7.**

September 15, 16, and 17, at Crystal Palace.—Surrey Bee-keepers' Association Annual Exhibition of Bees, Honey, Wax and Appliances, &c. Twenty-five classes (ten open to all). Increased prizes and medals, Schedules from F. B. White, Secretary, Marden House Redhill, Surrey. **Entries close September 1.**

October 4 to 7, at the Agricultural Hall, London.—Show of Honey and Bee-produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, &c., including the valuable Silver Challenge Cup of the B.B.K.A Schedules from Mr. Wm. C. Young, Secretary, 12, Hanover-square, London, W. **Entries close September 5.**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

H. K. (Burbage, Wilts).—Foul Brood Samples.—We can on no account undertake to send samples of diseased comb to correspondents desiring to have such. We are unfortunately troubled with more samples than are pleasant at times, but all such are destroyed with as little delay as possible.

Gwen L. (Weybridge).—Show Disappointments.—It is no doubt annoying for a "demonstrator on bee-culture" announced to appear at a show to fail in his attendance. The proper course, however, is to complain to the hon. sec. of your association, who will no doubt inquire into the matter, and afford some satisfactory explanation of the lapsus. It is quite beyond our province to make inquiries such as you desire, even if we had time to do so.

T. W. W. (Brockley).—Starting Bee-keeping.—If you can secure a strong, healthy stock headed by a queen of the present year, it would be reasonably safe to purchase now. On the other hand, to begin with a stocked hive that has wintered safely removes all risk; but the pleasure of watching for the first flight of the bees in early spring is well worth something, while the risk incurred is minimised by purchasing from a reliable dealer.

W. J. FARMER (Truro).—Foul Brood and Comb Foundation.—If, as we are given to understand, all comb-foundation made by the "Weed" machine is sterilised as one item of the "process of making," there should be no such risk as you fear if that make is used.

T. E. L. (Rumbling Bridge).—Bee Nomenclature.—The four bees may be classed as the ordinary brown bee, though all show the slight trace of foreign blood so prevalent nowadays.

Honey Samples.

"BUMBLE BEE" (Denbighshire). — Your sample is not so bad as to be suitable only for mead making, but it has been partly spoiled by a slight admixture with the honey dew prevailing in some districts. We also think there has been a good deal of privet blooming at the time it was gathered, and this helps to give it a somewhat unpleasant flavour and dark colour.

W. G. A. (Oxon).—Of the two samples we prefer No. 2. It has more character, so to speak, with good flavour, aroma, and consistency. The colour is not so light as No. 1, but the latter is thin, and not equal in flavour to No. 2. Why not stage both samples?

"DARK" (Sheffield).—Sample is spoiled for table use by the honey dew so prevalent in some places this year.

Suspected Combs.

C. B. (Ayrshire).—Brood in comb is chilled only.

S. DAVIDSON (Surbiton).—There is no foul brood in sample.

"DOUBLE B." (Cambs).—Without some particulars regarding the stock and its treatment we cannot account for matured dead brood in comb sent. The uncapped larvæ is in perfectly normal condition.

*** Our limited space compels us to hold over several letters on Foul Brood Legislation till next week. We must also request Correspondents to be as brief as possible in their comments for the same reason, and to avoid going over the same ground again and again by quoting arguments which have already appeared in our pages.*

Special Prepaid Advertisements.

Twelve words and under; Sixpence; for every additional Three words or under, One Penny

Trade advertisements of Hive Manufacturers and Dealers in Bee-goods, not available for "Prepaid" column, are inserted immediately below "Prepaid" at a minimum charge of 2s. per half-inch space, or 3s. 6d. per inch; orders for "repeat" or continuous advertisements having free insertion in "Record" as above.

Advertisements for current issue must be received by first post on Tuesday.

BEES FOR SALE, 10 Stocks in Bar Frame Hives, and 10 doz. worked out Shallow Bars. Offers? ROGERS, Heath Apiary, St. Albans. C 55

FINE TESTED 1904 QUEENS, reared from selected workers. Hardy and prolific. 2s. 6d. each. Guaranteed healthy and safe arrival. WHITING, Valley Apiaries, Hundon, Clare, Suffolk. C 48

HEALTHY DRIVEN BEES. Ready for delivery at once, 5s. per lot, put on rail same day. W. D. T. RICHARDS, Postman, Kingswinford, Dudley, Worcs. C 56

28TH YEAR. — RELIABLE QUEENS, 3s. 9d., Selected, 5s., in Introducing Cages, delivered. Small Swarms, 5s, 6d. on rail, cases free. ALSFORD, Expert, Haydon, Sherborne. C 59

HEALTHY DRIVEN BEES, with Queen, 5s. Package free. JOHN PHILLIPS, Spetchley, Worcester.

PROLIFIC QUEENS, with introducing cage, 2s. 6d. BR. COLOMBAN, Buckfast Abbey, Buckfastleigh, Devon. C 65

SURPLUS FERTILE QUEENS, 3s.; two for 5s. Selected 1904, 4s. In introducing cages. DAVIDSON, Expert, Beecroft, Basingstoke. C 78

DRIVEN BEES, from strong healthy stocks, 3s. 6d.; with Young Fertile Queen, 4s. 6d. Fertile Queens, per post, 2s. 6d. WILLIAM SOLE, Expert, 105, Graham-road, Wimbledon. C 74

RELIABLE BEE FARM, Rochford, Essex, has FOR SALE, SECTIONS, in card cartons, at 8s. 6d. doz.; plain, 8s.; extracted, at 56s. cwt., in 28lb. tins. Well packed. Free on rail. Cash or deposit. C 64

FERTILE QUEENS, Prolific Strain, ready now, 3s. 6d. CARBINES, Bee Expert, Cardinham, Bodmin, Cornwall. C 66

HEALTHY DRIVEN BEES. Headed 1904 Queens, 5s.; packed free. BROWN, Withington, Shrewsbury.

SEVERAL FRAME-HIVES, "Simmin's," "Wells," &c. Offers requested. Driven Bees Wanted. KER, Southbridge, Harlow. C 63

I AM in want of DEAD QUEEN BEES, also DEAD HORNETS for scientific purposes, can any bee-keeper oblige? HERROD "W.B.C." Apiary, Luton. C 77

SECTIONS WANTED (UNGLAZED), packed and delivered in London, quote price, &c. Also SHALLOW FRAMES, 50 to 100, combs to be returned. HERROD & STEWART. "W.B.C." Apiary, Luton. C 76

THREE VERY STRONG STOCKS in Frame-Hives, good condition, £5. J. W. MATTHEWS, Gt. Rollright, Chipping Norton, Oxon. C 75

FOR SALE, Four Stocks on frames, healthy condition, on rail, £6. PHILLIPS & YOUNG, Stevenage Herts.

FOR SALE, SECTION and EXTRACTED HONEY, terms for quantities. PHILLIPS & YOUNG, Stevenage, Herts. C 72

FOR IMMEDIATE DESPATCH.—20 Supers of wide end Shallow Frames, with full sheets of Drawn-out combs. 5s. each; 20 Racks of Sections with full sheets of Foundation, 2s. 6d. each; Full size Honey Extractor, with movable cages, as new, 18s. 6d.; no foul brood. J. W. AVERY, Longbridge Deverill, Warminster. C 67

GUARANTEED HEALTHY DRIVEN BEES with Queen, 5s. per lot; boxes returnable. Ninth Season. Also fine shallots. 2d. per lb. A. R. MORETON, Expert, Hallow, Worcester. C 68

BEES on Four Frames. Brood 1904. Queens 12s. 6d.; Fertile Queens, 4s. 6d. Honey Strainer, 8s. Perfect Honey Press, 4s. Exchange good honey. W. WOODS, Normandy, near Guildford. C 69

DRIVEN BEES. Several skeps to take up. 4s. per lot, with young Queens, 4s. 6d. Boxes, 9d. each. Cash with order. ARCHER, 64, Kingston-road, Oxford.

PEDIGREE HOMER PIGEONS, cot also. Canaries Flight and Crystal Palace Cages. Song boxes. Sell or exchange for honey. BEN ARMSTRONG, Goodwin-terrace, Carlisle. C 62

Editorial, Notices, &c.

GLAMORGAN B.K.A.

ANNUAL SHOW AT CARDIFF.

The annual exhibition of honey, bees, and appliances was held at the Sophia Gardens, on July 27 and 28, in connection with that of the Cardiff and County Horticultural Society. The show was in every way a great success. The weather was good, and the exhibits were more numerous than in any other year, notwithstanding the fact that the year's surplus is by no means a heavy one. Mr. Brewer (Bath) and Mr. Duncan officiated as judges, and made the following awards:—

Twelve 1-lb. Sections.—1st, C. T. Jenkins, Pontypridd; 2nd, D. George, Merthyr-Mawr; rd, J. Rees, Lisvane; 4th, G. P. Workman, Llanishen.

Six 1-lb. Sections.—1st, D. George; 2nd, W. T. Gunter, Cowbridge; 3rd, R. Morgan, Cowbridge.

Three Shallow-Frames of Comb Honey.—1st, R. Morgan; 2nd, D. George; 3rd, C. Hood, Clemenstone; 4th, G. P. Workman.

One Shallow-Frame of Comb Honey.—1st, D. George; 2nd, R. Morgan.

Twelve 1-lb. Jars (Light) Extracted Honey.—1st, J. Boyes, Cardiff; 2nd, Messrs. Boyes and Morgan; 3rd, J. Rees; 4th, R. Morgan.

Six 1-lb. Jars (Light) Extracted Honey.—1st, Messrs. Boyes and Morgan; 2nd, J. Boyes; 3rd, R. Morgan.

Twelve 1-lb. Jars (Medium or Dark) Extracted Honey.—1st, J. Boyes; 2nd, J. Boyes; 3rd, J. O. Jones, Llanishen.

Six 1-lb. Jars (Medium or Dark) Extracted Honey.—1st, J. Boyes; 2nd, D. George; 3rd, W. R. Ockwell, Peterston-super-Ely.

Articles of Food containing Honey.—1st, R. Morgan; 2nd, D. George.

OPEN CLASSES.

Twelve 1-lb. Sections.—2nd, C. Hood and J. Rees (bracketed).

Twelve 1-lb. Jars (Light) Extracted Honey. 1st, J. Boyes; 2nd, Messrs. Boyes and Morgan; 3rd, C. Hood.

Beeswax (not less than 1 lb.).—1st, R. Morgan; 2nd, D. George; 3rd, W. T. Gunter.

Collection of Appliances.—1st, J. Hibbert and Sons, Cardiff; 2nd, E. J. Burtt, Gloucester.

Frame Hive (not costing over 12s. 6d.).—1st, J. Hibbert and Sons.

Observatory Hive, with Queen and Bees.—1st, W. G. Preece, Cardiff.

Mr. Brewer gave interesting lectures in the bee-tent during the show. The meeting of members for a bee-chat in the secretary's tent was quite a success.

CAMBS AND ISLE OF ELY B.K.A.

The second honey show for 1904 was held at March on July 26, in connection with that of the Cambs and Isle of Ely Agricultural Society, and elicited forty-eight entries in seven classes. Considerable interest was shown by visitors, who thronged the honey tent throughout the day. Mr. C. N. White, St. Neots, officiated as judge, and made the following awards:—

Twelve 1-lb. Sections.—1st, George Hills, Comberton; 2nd, H. Seamark, Willingham; 3rd, J. Barnes, Burwell; v.h.c., J. Nightingale, Doddington; h.c., C. Drake, Sutton.

Twelve 1-lb. Jars Extracted Honey.—1st, J. Barnes; 2nd, H. J. Wisbey, Whittlesford; 3rd, C. Drake; v.h.c., G. Hills.

Twelve 1-lb. Jars Granulated Honey.—1st, J. Barnes; 2nd, R. Wood, Elm.

Honey Trophy.—1st, H. Seamark.

Beeswax.—1st, J. Barnes; 2nd, G. Hills.

GIFT CLASSES (OPEN).

Single 1-lb. Section.—1st, R. Brown, Somersham; 2nd, H. Seamark; 3rd, George Hills; v.h.c., C. Drake; h.c., R. Woods.

Single 1-lb. Jar Extracted Honey.—1st, W. J. Cook, Market Rasen, Lincs.; 2nd, T. Thompson, Market Rasen, Lincs; 3rd, R. Brown; v.h.c., Miss Edwards, Empingham, Lincs; h.c., W. Hatliff, Caistor, Lincs.

The concluding show was held on Bank Holiday at Cambridge, in connection with the show organised by the various horticultural and other societies of the town. The show proved a huge success, over 15,000 persons being present. In the honey and bee section the entries numbered 71, which were well displayed in a commodious tent. The five trophies of honey staged formed a most attractive feature; while the fine display of sections and extracted honey elicited praise from many connoisseurs. The awards were as follows:—

Trophy of Honey.—1st, George Hills, Comberton; 2nd, H. Seamark, Willingham; 3rd, C. J. Mapey, Cherry Hinton; v.h.c., J. Barnes, Burwell.

Twelve 1-lb. Sections.—1st, J. Barnes; 2nd, G. Hills; 3rd, T. E. Pilgrim, Cambridge; h.c., H. Seamark; h.c., A. Barber, Comberton.

Twelve 1-lb. Jars Light Extracted Honey.—1st, J. Barnes; 2nd, C. Bocock, Ashley; 3rd, H. J. Wisbey, Whittlesford; v.h.c., C. Drake, Sutton; h.c., G. Hills.

Twelve 1-lb. Jars Dark Extracted Honey.—1st, H. T. Frohock, Willingham; 2nd, C. J. Mapey; 3rd, G. Knowles, Ely; v.h.c., G. Hills; h.c., J. Phillips, Longstanton.

Twelve 1-lb. Jars Granulated Honey.—3rd, J. Barnes. (1st and 2nd not awarded.)

Straw Super of Honey.—1st, J. Barnes; 2nd, H. Seamark; 3rd, G. Hills.

Bell Glass of Honey.—1st, A. Barber; 2nd, W. Wilson, Trumpington; 3rd, J. Barnes.

Two Shallow-frames Comb Honey.—1st, G. Hills; 2nd, J. Barnes.

Beeswax.—1st, J. Barnes; 2nd, G. Hills; 3rd, W. Bird, Cambridge; v.h.c., C. Drake.

GIFT CLASSES (OPEN).

Single 1-lb. Section (13 *Entries*).——1st, R. Brown; 2nd, W. J. Cook, Market Rasen; 3rd, H. Seamark; v.h.c., T. Bunting, Debden; v.h.c., A. Barber; h.c., G. Hills; h.c., J. Phillips.

Single 1-lb. Jar Extracted Honey (14 *Entries*).—1st, R. Brown; 2nd, T. Thompson, Market Rasen; 3rd, T. Bunting; v.h.c., W. Turner, Brent Eleigh; h.c., W. J. Cook.—G. E. ROGERS, Hon. Sec.

LEICESTERSHIRE B.K.A.

ANNUAL SHOW.

This Association held its annual honey show in connection with the Abbey Park Flower Show at Leicester on August 2 and 3. Messrs. R. Godson, Tothill, Alford, Lincs, and H. M. Riley, Leicester, officiated as judges of the bee and honey department and made the following awards:—

Observatory Hive with Bees and Queen.—1st, Sir Humphrey de Trafford, Bart., Market Harboro'; 2nd, A. Beadsmore, Woodhouse Eaves.

Twelve 1-lb. Sections.—1st, Sir Humphrey de Trafford, Bart.; 2nd, J. Waterfield, Kibworth; 3rd, H. Willey, Gilmorton.

Twelve 1-lb. Jars Extracted (Light) Honey.—1st, H. Dilworth, Shangton; 2nd, J. Waterfield; 3rd, A. Smith, Walton Grange; 4th, E. A. Jesson, North Kibworth; h.c., H. Willey.

Twelve 1-lb. Jars Extracted (Dark) Honey.—1st, J. Waterfield; 2nd, H. Dilworth; 3rd, E. A. Jesson.

Twelve Bottles Granulated Honey.—1st, J. Waterfield.

Display of Honey.—1st, J. Waterfield.

Six Bottles Dark Honey (Novices).—1st, J. Colby, Sibbertoft; 2nd, A. Meadows, Market Harboro'.

Six 1-lb. Sections (Novices).—1st, J. Colby; 2nd, Mrs. Falkner, Market Harboro'.

Six 1-lb. Jars Light Honey (Novices).—1st, J. Garratt, Peatling Magna; 2nd, A. Ward, Great Bowden; h.c., A. Meadows.

Beeswax.—1st, A. Smith; 2nd, J. Waterfield.

Honey Beverage.—1st, Mrs. Waterfield, Kibworth.

Honey Cake.—1st, Mrs. Waterfield; 2nd, Mrs. Falkner, Market Harboro'.—JOHN WATERFIELD, Hon. Sec.

WORCESTERSHIRE B.K.A.

ANNUAL SHOW.

The annual show of this association was held on August 4, in connection with that of Madresfield Agricultural Society. In consequence of a very poor season the entries were few. There were a few good exhibits, but for the most part the honey was of inferior quality owing to the prevalence of honey dew. The weather during the early part of the day was adverse, owing to a thunderstorm with heavy rain. During the afternoon, however, the sun shone brilliantly and dried up the ground, and there was a very good attendance of the public. Dr. Walpole Simmons, Worcester, assisted by Mr. J. P. Phillips, were the judges, and the Rev. E. Davenport was present with the "Bee-tent," and gave several interesting demonstrations with bees. The following is a list of the awards:—

Complete Hive for General Use.—1st, H. Swift.

Twelve 1-lb. Sections.—1st, W. E. Hyde; 2nd, Miss S. S. Boughton; 3rd, G. A. Pardoe.

Six 1-lb. Sections.—1st, W. E. Hyde; 2nd, Miss Stephens; 3rd, E. A. Milward.

Twelve 1-lb. Jars Extracted Honey.—1st, W. E. Hyde; 2nd, G. A. Pardoe.

Six 1-lb. Jars Extracted Honey (Open).—1st. W. J. Cook; 2nd, G. A. Pardoe.

Six 1-lb. Jars Extracted (Dark) Honey.—1st, W. E. Hyde.

Bees Wax.—1st, E. A. Milward; 2nd, W. E. Hyde.

Shallow-Frame of Comb Honey. — 1st, E. A. Milward.—(*Communicated.*)

NORTHUMBERLAND AND DURHAM B.K.A.

On Saturday, July 16, the Northumberland and Durham B.K.A. held their annual excursion at the apiary of Mr. George Rochester, Cutlers Hall, Blackhill. The weather was all that could be desired, and the company gathered took great interest in the proceedings. After the inspection of hives, etc. (over fifty), a meeting was held to consider the proposed Foul Brood Bill (Sydney Annandale, Esq., President N.W. Durham B.K.A., in the chair), and after discussion on various points of the Bill, it was unanimously decided to ask the County Councils of Northumberland and Durham to support same. This decision was arrived at by bee-keepers who have suffered loss from foul brood along with those who have been able to keep their apiaries free from disease, most of them careful and advanced bee-keepers, as I can personally affirm.—JAMES WADDELL, Hon. Sec.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "*THE EDITORS *of the 'British Bee Journal,' 10, Buckingham-street, Strand, London, W.C." All business communications relating to advertisements, &c., must be addressed to "*THE MANAGER, *'British Bee Journal' Office, 10, Buckingham-street, Strand, London, W.C."*

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

Some Bee Beliefs.

[5611] I pass lightly over several of the more common beliefs, because they have been frequently recorded in our pages. Among such is "tanging" the bees, one of the most ancient, evidently invented at first to secure a legal claim to runaway swarms by apprising all near neighbours that bees were treking. Gradually the belief grew that bees liked the generally unmelodious sound; and out of that, again, rose the idea that it was almost a necessity to the safe securing of a swarm to ring on basin, pot, or kettle. Then the companion custom of "telling the bees" had its origin in the well-known fact that very frequently indeed the death of the bees followed the death of their master, from the simple cause of missing his fostering care and diligent tendence at the very time that attention was most requisite. Here we have a simple instance of effect following cause as a natural sequence, and it was noted so frequently that, perhaps naturally, a superstitious belief grew gradually round the strange and mystic occurrence oft repeated.

In recent literature I have seen the subject of "telling" gravely upheld by many writers, amongst whom I may select Whittier and Leslie Stephen. Two very peculiar instances of bees dying out soon after their owners' death came under my own observation, but both were easily explained on the hypothesis I have adduced. Then the extraordinary, superstitious belief that bees could be generated from the carcase of a lion or a cow is as old as Virgil at least, and as modern as that famous husbandman, Antony of Carew, in Cornwall. Possibly Samson's honey, got out of the carcase of the lion, may be the key to the origin of the fable.

It is a very common belief that bees are lucky with some people, and will thrive with them, but that they are unlucky with others, and will not thrive under their care. The explanation is simple, and the fact may be illuminated by quoting two well-known proverbs: "A bad shearer never got a good hook," and "A fool and his money soon part." A natural aptitude is, of course, a fundamental requisite to success in the pursuit, but any man able and willing to put a little brains and work into bee-keeping can make it a paying speculation. *Luck* is not in the running, and the labourer here is the peer of the lord, and can produce as much and as good honey. It was an ancient belief that bees to thrive must be bought with gold or they would not repay the owner. Corn was another system of payment recommended of old, no doubt a lingering remnant of the age of barter; and two other pleasant modes of acquiring them brought the best of luck, viz., receiving them as a gift, or "finding" them, I suppose, in the form of a runaway swarm. I never purchased or obtained any of my bees in any of these four ways, yet I am confident they have thriven with me. The same may also be said of the next exploded belief, which maintained that bees should not be carried north, but "must be removed southward." I am altogether unable to elucidate this strange superstition, which does not hold good in Scotland at least. The next point may be more simply explained as far as ancient modes of conveyance by water are concerned, although by new and improved conditions the teeth of the statement are drawn. It was very generally recognised as an unlucky venture to carry hives by water. The countless colonies now in America, most of them the fruits of the first lots transported by the early colonisers over the "Eastern Main," show, if it was a rule, it had its exceptions, telling strongly against the universality of its truth or application.

In olden times it was ever esteemed an ill omen for bees to alight in places where they were not accustomed to pitch. One or two instances, quoted from ancient history, may be given to illustrate this. Bees lighted on Pompey's ships, and thereby presaged his overthrow; and, on the same happening in Brutus' army, the soothsayers considered it such an ill omen that they compelled him to shift his camp to a new site. In another case bees lit on their ensigns just before they endured a defeat; while, when bees in swarming took possession of Antonius's statue, the fact was bruited abroad as an ominous presage of the fall of his empire. I am able, however, to give two examples of such an occurrence bringing luck, as in one instance a swarm settled in a camp, after which the leader fought prosperously; and, when sleeping as a child, bees brought honey to the lips of Plato, foretelling the singular sweetness of his eloquence. Many more instances of bees bringing good or bad luck might be re-

corded, but perhaps the bias of the beholder might convert a good into a bad omen.

The old belief that the queen was the monarch of the hive, marching along in pomp and pride, followed by a train of regal attendants, issuing orders, giving out commands, regulating every movement by voice or gesture, is exploded. That the drone is a worker bee who had lost its sting is now never credited; nor do modern beemen believe that they were made to aid the workers by "sitting" to hatch the young. The old belief that the bees lived two, four, six, or even ten years, is no longer "current coin," and we would stickle at the statement that they are even "one year's birds," knowing as we do that at times they may get worn out in the space of a single month. What could possibly have given rise to the belief that "spitting' on irate bees would pacify them? Yet a writer little more than a century ago gravely says: "If bees are angry spit on them. With bare hands and face I went up the ladder, and, *spitting on them many times*, I took them out by handfuls." It would be a work of supererogation on my part to appraise the value of this wonderful recipe. The old belief that wax, like pollen, was a product of the flowers, and, like it, carried by the bees into their hives when out on their foraging flights, was a pardonable though erroneous one. But what are we to say of a comparatively modern writer gravely arguing that they also carried in "animable matter," from which sprung the young bees, after it had been consigned by the workers to the cells and specially treated by the king bee? It is quite as fanciful as Virgil's steer! That word "king" reminds me that the belief long prevailed, and was slow to die, even in the face of established facts, that the sovereign of the hive was of the masculine gender, and simply an autocratic governor, whose royal will was law.

An ancient writer gravely states that—"Bees are of nine orders, each proceeding from a different stock. There are lion-bees, bull-bees, cow-bees, and calf-bees. The king-bees are those which spring from the brain of a lion, the noble-bees spring from the other parts of the lion, and the canaille from cows, calves, etc." Strange what could give rise to such an absurd belief!

A learned and able writer, whose work was issued just a century ago, records that in some parts of England bees were not permitted to leave the hive on a Friday; and Wednesday was also an unlucky bee day! Then, what about the bees (said to be seen) actually collecting little stones to weight them on a windy day so that they might not be driven down by the force of the gale? But I must pause, and have only to say more in regard to all these superstitious beliefs I have given.—*Credat qui vult!*—D. M. M., Banff.

FOUL BROOD EXPERIENCES.

[5612] Is your correspondent, Mr. Farmer, sure that he is on the side of the majority with regard to foul-brood legislation? I have travelled among bee-keepers in many parts of the country, but, so far as my memory serves, have only met one that was opposed to legislation. Can any sensible man imagine that compulsory inspection is directed against the "advanced and careful bee-keeper"? Or, to put it in another way, because a man is honest does he require no protection from rogues and thieves? The proverb says, "None are so blind as those who won't see." Why are a few of your correspondents so terribly afraid of having their bees examined? Is it simply because they are afraid that the apiary will be upset? Or is there something radically wrong with their bees that they do not wish an expert to see? I generally find—when engaged on expert work—that the latter is the case with those who say, "I won't trouble you to look through my stocks." Besides, an expert can surely be counted on as careful and skilful in handling bees—perhaps even as Mr. Woodley himself—or why the title? But how is it possible for an inspector, or expert, to know if an apiary is healthy without examining the hives? I can assure any one that if an apiary was found healthy at the first examination an inspector would have plenty of occupation in dealing with stocks that are diseased, without fussing around the aforesaid healthy ones again that season. In my expert tours among members of associations I invariably find that a thorough examination of their stocks by the expert is considered one of the most valued advantages of membership. It is obviously quite impossible to visit all members before supers are on, yet I have never had any complaint where they have had to be taken off in order to examine stocks. I totally differ from Mr. Farmer when he says that legislation will "cause great annoyance to all advanced and careful bee-keepers." In my opinion, these are just the class that would welcome it. Whether protection is or is not required from the opposite class I will not say, but I will give an instance or two from my own observation that may serve to illustrate the point. One bee-keeper had a near neighbour whose hives were reeking with foul brood. He made offers to buy the diseased stocks, or replace them with healthy ones, if destroyed, but the only answer he could get was, "The bees are my own, and I shall do as I like with them." Another man had about thirty lots of bees housed in all kind of domiciles, from baking-powder boxes to rotten skeps and filthy frame-hives, most of them reeking with disease, the whole lot being dotted here

and there on about a quarter of an acre of ground. When a swarm came off it was hived in whatever came readiest to hand, dumped down where it was on the bare ground, and left to its fate! The owner said he "had no time to look after the bees and had tried to give them away and could not!" An advanced and careful bee-keeper, whose hives were in very clean condition, had come to live about 500 yards away, and the disease had just made its first appearance among his hives at time of my visit. Another apiary, whose owner is well known as an up-to-date bee-keeper, has had his apiary reduced from thirty stocks to thirteen, through a neighbour throwing combs from diseased stocks out in his garden for other bees to clean out. I could give other similar instances, but the above will suffice, and I ask, how would Mr. Farmer deal with these? It cannot be denied that such cases require legal powers for dealing with them. These are the sick that need a physician. I would again ask, has any one an alternative scheme to propose that is in the least practicable? If not, why try to hinder those who desire to benefit the industry; or, at the least, give us some logical reasons for opposition, and remember that assertion is not proof.—J. Herrod, Trentside Apiary, Sutton-on-Trent.

FOUL BROOD LEGISLATION.

[5613] Without the smallest degree of personal feeling against those who differ from myself on this much-debated subject, I cannot rid myself of the impression that some half-fledged expert has crossed the path of Mr. Farmer, when he infers that expert work is usually done in holiday-time, as stated on page 305. The expert proper, whoever he be, places his time and services at the disposal of the County B.K.A. or of the County Council, as the case may be. I have been touring for nearly four months without a stop, and it has been no holiday time either, for I have travelled over 2,000 miles, visited 583 apiaries, and met 525 (or 90 per cent.) of the owners or managers thereof, among whom I find an enormous majority in favour of the proposed Bill. I see that some well-meaning critics complain of the proposed Bill as being impracticable; but so far as it goes the Bill is clear and concise on the methods of locating disease. When writing on this subject it makes one regret being an expert largely engaged in touring work, because it may look like "axe grinding," but I think all will admit the necessity for some kind of compulsory powers with regard to foul brood, especially when hundreds of hives are just now being placed on the moors for the heather harvest. These hives will for some weeks to come stand side by side—healthy and diseased, strong and weak! It only needs a bit of thought from level-headed men to tell what all this may mean to the bee-keeper whose stocks were healthy when sent out. Let us, then, join hands and help to bridge over this abyss of foul brood, which yearly swallows so much of the unstinted labour of our little winged friend, the honey bee. This can only be done by destroying apiaries known to be hotbeds of disease.—James Waddell, Alwinton, Northumberland.

FIGHTING FOUL BROOD.

A SURREY BEE-KEEPER'S EXPERIENCE.

[5614] I am much interested in the discussion now going on in B.B.J. and *Record* concerning the proposed Foul-Brood Bill. I notice that opinions are divided, some being in favour of and some opposed to legislation. We are told by some that they can keep foul-brood at bay (very brave and courageous gentlemen these) by doing certain things, and they give us very good advice as to what we should do to guard our apiary from the pest. But I would like to ask these no doubt well-meaning gentlemen what they would do if they had the enemy planted in the next garden with a cantankerous bee-man to deal with? One of these (not very rare) specimens, who will not do a single thing to guard against foul-brood, and not only so, but will leave diseased hives on their stand after the bees have died out for every healthy stock near by to go and rob out. Such has been my personal experience, and in consequence I must confess my utter inability to "keep the disease at bay," as we are told to do. At the same time, I feel confident of being able to do so if the enemy was kept at a respectable distance away from my apiary. About ten years ago I was asked to examine my neighbour's hives, after being told they had not yielded any surplus honey for three years. I made the desired examination, and found them reeking with disease. My advice was total destruction of hives and everything belonging to them. I said this because the hives were very old and ricketty. However, my advice was not acted upon for several years after. The first time the disease appeared in my apiary was in a strong swarm hived on full sheet of foundation about the middle of May. The following August I found this stock plainly affected with foul-brood, and I had no doubt the infection came through the bees "robbing" diseased honey from the above-named hives. It seems clear, therefore, that the "new comb" theory is not sound. I am, as much as anyone, in favour of absolute cleanliness; moreover,

I do my best to practise it. I use naphthaline in all my hives, and renew all combs as they become old and dirty; but all these things, "though good in their way," will not keep the scourge away when you once get it close to your door. Some object to have their bees examined between May 1 and September 1. Well, I am not in favour of pulling bees about more than is absolutely necessary; but if there are two evils, and you cannot avoid both, then we must choose that which is least.—WILLIAM BRIGGS, Abinger Hammer, Dorking, Surrey, August 13.

TRANSFERRING BEES.

[5615] I notice that two or three correspondents, notably No. 3509, "C. A. B., Aylesbury" (page 307), have had the same anxiety as to wintering bees in skeps as I have had, and being desirous of transferring them to a frame-hive, have referred to you for advice. On thinking the matter over, and being a bit of a carpenter myself (for I make all my own hives) it struck me a way out of the difficulty would be to fit over the body-box a platform on which the skep could rest, the usual ten-frame hive not being large enough to receive the skep.) A lift and roof to fit this platform is then necessary. In the platform mentioned, a large circular hole, say about half of the diameter, must be cut to enable the bees to descend freely. Then place the skep on platform and pack for winter. The colony, which should have ample supplies for winter, would thus be protected and all risk of loss removed. The bees, if dealt with as above, would doubtless work out the foundation between this and November, and so by the spring the colony would be ready for transferring, if they had not already transferred themselves. I am working this plan with one skep, and will give the result in the spring. By it all brood will be saved. I send name, etc., and sign, CYMRIC, Winchester.

[We shall be very pleased to have the promised report after trial of the above plan; but so far as regards the bees working out foundation between this and November, our correspondent must not be surprised if the foundation is not worked on at all before next spring. It would also be interesting if we had a report from "C. A. B., Aylesbury," giving the results of the plan we advised—that is, if our suggestion has been followed.—EDS.]

Queries and Replies.

[3521] *Bees Not Working in Sections.*—I shall esteem it a very great favour if you will be good enough to give a beginner a little advice, through your valuable paper, on the following bee difficulty.

I have only one hive—a "W.B.C."—which I purchased in March last with stock of bees, and have had one very large swarm from it in mid-June. My difficulty, however, is that, although I supered with a rack of sections as long ago as early in June, not a single section is filled yet, and the bees have only drawn out the foundation very slightly. I have a zinc excluder between the brood-chamber and rack of sections, but this does not prevent the bees passing up, because when I looked this evening to see if any sections were ready to take off, I saw a few bees working up in the sections, though there are plenty of bees now in the hive. Can you suggest anything I could have done to induce the bees to work in super? Our district is fairly good for bee-fodder, and I quite expected to have taken about fifty sections ere this. Thanking you in anticipation of your reply,—SIDNEY CLEMON, Herts.

REPLY.—The most probable explanation of the bees' swarming, in preference to working in the sections, is that there was insufficient ventilation or shade during the very hot weather prevailing at the time. If the stock was so strong as stated, it should have been supered in May. With regard to the bees not filling the sections later on, it is only in very good seasons that a colony will do much in surplus-storing after sending off a very large swarm, as yours is stated to have done, and the present year has not been a good one in Herts for honey-gathering.

[3522] *Transferring Bees from Skeps to Frame-Hives.*—I have read several queries and replies in the B.B.J. lately, but not one that quite meets my case, which is as follows:—On June 5 a large swarm issued from one of my hives, and three days later another small swarm issued (a small one), both of which were hived in skeps, as no smarms were expected, and I had no frame-hives ready. However, on July 8 I put the large swarm of July 5, skep and all, on top-bars of a frame-hive, and hope they have by now transferred themselves below. But in case I find they have not gone down, what will be the best plan for me to adopt? Should I drive the queen from skep, and, after running her into frame-hive, place excluder on, and again put the skep on to allow the bees to hatch out brood? With regard to the second swarm, I was not able to put them on top-bars of a frame-hive till July 24. Do you advise me to deal with them the same as with the first swarm. I send name, etc., and sign—ENQUIRER, Isle of Wight.

REPLY.—If the queen is found to have

started breeding in the frame-hive, no driving will be needed, and the excluder may be put on to prevent any chance of her taking possession of the skep. If no brood is found in frames, we may refer you to reply on page 307 (No. 3509), which gives all the particulars needed for your guidance.

[3523] *Dealing with Driven Bees.*—Will you please say in next issue of B.B.J.: 1. How many frames of foundation should be put in a hive for, say, 5lbs. of driven bees? 2. Provided I give the bees, say, two frames of ready-built comb, could I safely put the hive on to the heather near here with a rack of drawn-out sections on top? And if I did this, would the bees enable me to harvest some heather honey? 3. I suppose I could later on give them autumn syrup-food for the winter? 4. I am expecting two lots (5lbs. in each) of driven bees soon. Would it be best to hive them singly, or should I unite both lots and put the whole 10lbs. of bees into a hive taking sixteen frames? Sorry to trouble, but although I kept bees last year I lost them all in the winter (being away), and I did not know of the existence of the B.B.J. till a month ago.—C. S. K., Brecon, South Wales.

Reply.—1. In hiving driven bees it is always best to give them built-out combs, if such are available, it being most helpful to successful wintering, if the bees have little or no comb-building to do. 2. It will be useless to hope for surplus this year from a stock so formed, even though taken to the heather. You had better, therefore, leave all honey the bees gather this year for home consumption. 3. Yes, you might do this; but it would mean much labour and consequent waste of life, while involving trouble to bees and bee-master in removing honey and refilling the combs with syrup. 4. We should hive each lot separately, as being the most profitable in the end.

[3524] *Difficult Points for Beginners in Bee-Keeping.* — Will you kindly instruct me on the following points, which present difficulties to my mind?—1. How does it happen that, after a hive of bees has done good service during the summer, and continually augmenting its forces to the end of the season, it becomes theoretically possible to pack it up for the winter on six or seven frames? This is according to advice generally given by experts. 2. A swarm of bees issued from one of my hives on July 31. It was duly hived on four frames of foundation, but the day after there only appeared to be sufficient bees to cover a single frame. Is it, therefore, likely that this swarm, without being augmented artificially, will survive the winter? 3. How long ought an average colony of bees, covering, say, ten frames, to be filling a rack of twenty-one sections, where lime is plentiful and blackberry-blossom is nicely out, and fairly plentiful, and the weather good? Most of the white clover is over.—T. S., Carlisle, August 8.

Reply.—1. It is a mistake to suppose that a stock of bees is "continually augmenting its forces to end of the season." The rate at which brood-rearing goes on rapidly diminishes in your northern county after July sets in, while the bulk of the worker bees die off after six or seven weeks of the busiest gathering time. It thus follows that only a small proportion of the bees which have undergone the heavy labours of honey-gathering live to go into winter quarters at all. 2. The common practice is to hive swarms on six or ten or more frames, according to size, and cover with a single quilt after hiving. This is necessary in order to reduce the heat, and prevent a breakdown of the foundation in frames. Then, next day, the number of frames is reduced to size of cluster, and closed up with division-boards, as stated in "Guide-Book." In your case it would seem that either a large portion of the swarm returned to the parent hive, or it was an exceedingly small swarm. Bees that only cover "a single frame" cannot be deemed a normal swarm at all. 3. So much depends on the rate at which honey can be got by the foraging bees at the time that it is only misleading to say how long the work of filling a rack of sections will take. We have known a rack to be filled and sealed in six or seven days, and have known bee-forage to be in full bloom, while bees took almost as many weeks to complete the same number of sections.

[3525] *Queens Not Laying in July or August.*—I had a hive of bees which was fairly strong this spring, but as the season advanced the bees began to dwindle. I thought perhaps it was the fault of the queen, so I bought a young 1904 Italian and introduced her successfully about three weeks ago. After introducing the queen I have been feeding continuously with syrup, but on looking into the hive yesterday I found the queen all right, but no trace of brood. Before introducing the queen I took out some old frames and replaced them with new ones containing full sheets of foundation, and the bees have drawn out some of these into comb and filled the cells (with the syrup, I presume) and have started to seal them over. The queen was an untested fertile Italian, purchased from a well-known queen-breeder in the South, and I wish to know:—1. Do you

think it probable the queen may not be fertilised? 2. As there are now only sufficient bees in the hive to cover three or four frames, would you advise me to purchase a lot of driven bees? If so, what ought I to do with the Italian queen if she is not fertilised? Hoping for a reply at your early convenience, I send name and sign—AMATEUR, Ayrshire, August 13.

REPLY.—The well known and reliable reputation of the dealer from whom you purchased leads us to feel sure that an unfertilised queen would not be sent. 2. We advise you to send particulars to the dealer in question and get his reply as to what you should do under the present conditions.

[3526] *Bees Under Floor of Bedroom.*—Will you kindly tell me through B.B.J. the best way of getting bees out of a house? They have been located there for two years now, and have not swarmed. It must be a very strong lot. They have made their home between the floor and ceiling of an upstair-room, the entrance being just over doorway. From an examination made they seem to have worked from the doorway three-parts of the way across the room. I, therefore, ask: 1. Would it be possible to brimstone the bees by means of my bee-smoker? I might bore holes in boards in order to use the smoker if I could burn the brimstone in the latter. The bees are a nuisance, and must be got rid of. 2. Should I get them out before or after harvest? Reply will oblige. I send name for reference.—W. R., Braintree, Essex.

REPLY.—It would be quite useless labour attempting to "get the bees out" by means of brimstone and a bee-smoker as proposed. Having built their combs beneath the floor so far across the room as stated, the best and most practicable plan will be to remove such parts of the flooring as cover the bees and combs, and cut the latter out one by one, keeping the bees well subdued by smoke while operating. This is not an easy job for a beginner, and it would be very advantageous to have the help of a more experienced bee-man, if such is available. If the bees are to be destroyed entirely, the task may be considerably simplified, as the comb and bees could be put into a skep as removed; then, after pushing a few pointed sticks through the skep crossways, to support the combs, inverting the whole over an old tin dish containing a few ounces of powdered sulphur, with a hot coal dropped in centre. The bees will be all dead in a couple of minutes. 2. Defer operating till the season is over. Of course, any combs containing good honey can be cut away and saved.

[3527] *Preserving Brood of Driven Bees.*—I have been asked to drive a skep of bees for an old lady, so that she make take the honey. As there may be a considerable amount of brood in skep at present, I am at a loss what to do with same after bees are driven. I might say she has no frame-hive; she keeps nothing but skeps, so that I could not tie brood in frames. Your advice would greatly oblige—G. W., Sandiacre, Notts.

REPLY.—Though no mention is made of the fact, we presume you are to have the driven bees, and intend to put them in a frame-hive. This being so, the question is: Can you get the combs containing brood safely home without damage or chilling? If this can be done (and it will need great care in keeping warm and not damaging the cappings of sealed brood), you should either tie the latter in frames or fix the combs up in a small box—supporting them by wooden pegs—and set the box above feed-hole in quilt. The bees will then cover the brood and keep it warm till hatched out. It is, however, seldom worth while trying to preserve brood in this way.

Echoes from the Hives.

Eskdale, Carnforth, August 2.—My bees have done very well this season so far, all being in grand condition for the heather. My strongest lot now fills three section-racks, which is good for this district. As soon as Naphthaline half-balls were reduced a little in size, my bees promptly carried them out of hives.—L. BURNETT.

Pilsby, Chesterfield, August 15.—The bee season is over at Pilsby, as far as honey-gathering is concerned. My hives were packed with bees all summer, ready for the expected good time, which never came, and so the bees expended some of their energy in gathering about 20-lbs. per hive of stuff not unlike black treacle. I extracted that without loss of time, and packed the hives off to the heather, where I hope the remainder of the bees' energy will be expended in gathering some good heather honey, of which there are prospects of a good crop if the opening bloom is anything to go by. The honey dew does not appear to have touched all districts, as two hives I have had four miles away all summer have yielded some excellent honey of good colour.—TOM SLEIGHT.

Bee Shows to Come.

August 24, at Fleetwood.—Honey Show in connection with Fleetwood Floral and Horticultural Society. **Entries closed.**

August 24, at Reading.—Honey Show of the Berks B.K.A., in conjunction with the Annual Exhibition of the Reading Horticultural Society. Open

classes for comb honey in sections and for extracted honey. Local classes include prizes of 20s., 15s., 10s., and 5s. for honey trophy. Also classes for owners of small apiaries. Schedules from D. W. Bishop-Ackerman, Hon. Sec. Berks B.K.A., 131, King's-road, Reading. **Entries close August 21.**

August 24, at Sandbach.—Honey Department of the Cheshire Agricultural Society's Show, under the management of the Cheshire B.K.A.

August 24, at Bradford Abbas, Dorset.—Annual Show of the Yetminster and District B.K.A. in the old Vicarage ground. Three open classes, including three 1 lb. jars extracted honey and three 1-lb. sections. Schedules (with entry form) from G. Leeding, Hon. Sec., Bradford Abbas, Sherborne, Dorset. **Entries close August 20.**

August 24 and 25, at Leamington.—Annual Show of the Warwickshire B.K.A. in connection with that of the Warwickshire Agricultural Society. Schedules from James Noble Bower, Hon. Sec., Warwickshire B.K.A., Knowle.

August 25, at Llangollen.—In connection with the Sixth Annual Flower Show. **Entries closed.**

August 25, at Montgomery.—Montgomery and District Horticultural Society. **Entries closed.**

August 27.—Twelfth Annual Show of the South of Scotland Bee-keepers' Association. Five open classes for extracted and comb-honey and wax. Schedule and entry form from Hon. Sec., S. M'Vie, Essex Park Cottage, Dumfries. **Entries close August 20.**

August 27, at Barnton, Northwich.—In connection with the Barnton Horticultural Society. Six local classes, and classes open to the county, and members of the Cheshire B.K.A. for twelve 1-lb. jars extracted honey, and for 1-lb. beeswax. The C.B.K.A. give their silver medal to winner of first prize for twelve jars of honey. Schedules from Mr. S. Wade, Barnton, Northwich. **Entries close August 20.**

August 30, at Cartmel, Lancashire.—Honey show in connection with the 32nd Annual Show of the Cartmel Agricultural Society. **Entries closed.**

September 3 to 10 at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders' (12th) Annual Exhibition and Market. Numerous classes and liberal prizes for comb and extracted honey and beeswax. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad-street, London, E.C.

September 13, at Woodstock.—Honey Show of the Oxfordshire Bee-keepers' Association in conjunction with the Woodstock Agricultural and Horticultural Association. Open classes for single 1-lb. section, and single 1-lb. jar extracted honey. Prizes 7s. 6d., 5s., and 2s. 6d. (entry free). Schedules from H. M. Turner, Hon. Sec., The Turl, Oxford. **Entries close September 10.**

September 17 to 24, at the Agricultural Hall, London.—Honey Show in connection with the twelfth Annual Exhibition and Market of the Grocery and Kindred Trades. Numerous classes and liberal prizes for comb and extracted honey and beeswax. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad-street, London, E.C.

Special Notice.—In connection with above Shows there will be a *Working Exhibit* illustrative of modern Bee-keeping and Honey-production, including *Demonstrations* with *Live Bees* and extracting honey from combs for sale by skilled experts. (See large advt. p. v.)

September 14 and 15, in Waverley Market, Edinburgh.—Eleventh Exhibition of the Midlothian B.K.A. in connection with that of the Caledonian Horticultural Society. Twenty-four classes, with good prizes, for honey and beeswax, including seven open classes (three prizes in each). Schedules from W. Reid, Secretary, Heriot, Midlothian. **Entries close September 7.**

September 14 and 15, at Derby.—Derbyshire B.K.A. Twenty-third Annual Show of Hives, Bees, and Honey on the show ground of the Derbyshire Agricultural Society. Five open classes for honey, and collection of bee-appliances. Schedules from R. H. Coltman, Hon. Sec. D.B.K.A., Burton-on-Trent. **Entries close September 3.**

September 15, 16, and 17, at Crystal Palace.—Surrey Bee-keepers' Association Annual Exhibition of Bees, Honey, Wax and Appliances, &c. Twenty-five classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, Secretary, Marden House, Redhill, Surrey. **Entries close September 1.**

October 4 to 7, at the Agricultural Hall, London.—Show of Honey and Bee-produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, &c., including the valuable Silver Challenge Cup of the B.B.K.A. Schedules from Mr. Wm. C. Young, Secretary, 12, Hanover-square, London, W. **Entries close September 5.**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

A BEGINNER (Ilfracombe).—Suspected Loss of Queen.—The dead bee sent is not a queen at all, but a worker crushed out of shape.

W. A. PHILLIPS (Truro). — Foul Brood Legislation.—It sounds easy to "assemble a meeting of bee-keepers (members and non-members of county associations) as representing the whole industry of the kingdom, to discuss and consider the advisability or otherwise of Foul Brood Legislation"; but our correspondent does not say how such a meeting can possibly be got together! Until some practical answer can be given on this point it is futile to discuss it.

F. TURNER (Sheffield). — County Bee-Keepers' Associations.—There are four B.K.A.s in Yorkshire—i.e., one county and three district associations. There is also a Derbyshire B.K.A. The names and full addresses of all hon. secs. are published in every issue of our monthly, the *Bee-Keepers' Record*, which may be had, post free, for 2½d. from this office.

G. W. M. (Yorks).—Doolittle's "Scientific Queen-Rearing."—This work is not published in England. Mr. Geo. Rose, Great Charlotte-street, Liverpool, is the only dealer we can call to mind who stocks the book. The price is 2s. and postage.

G. H. (Leicester).—Bee Pamphlets.—The Rev. G. M. Bancks's pamphlets on "Honey and its Uses," "Mead, and How to Make It," and "Honey Vinegar," may be had from this office (*vide* advt.). The booklet on the "Wells System" is published by the author, Mr. Geo. Wells, Aylesford, Kent. "Beeswax," by J. Dennler, is out of print.

F. C. P. (Warminster).—Bee Parasites.—The parasite you name is the Braula cœca, or blind louse. It is fully described and illustrated on page 160 of "Guide-Book," with directions how to

deal with it. It has also been repeatedly referred to in B.B.J.

AMATEUR (Ayrshire).—Soluble Phenyle.—It is well known that "pure phenol" is carbolic acid in crystals, from which the impurities (i.e., creosote) is removed. But this is not "soluble phenyle." Why not show your copy of the "Guide-Book" to the local chemist, with Messrs. Morris Little and Son's advertisement therein? He will then see what "soluble phenyle" is, and where it can be obtained.

Suspected Combs.

R. D. (Rugby).—Comb is affected with foul brood.

F. C. P. (Warminster). — Foul brood is rapidly developing in your sample of comb.

Honey Samples.

BOWDON (Cheshire). — Sample is mainly honey dew, very dark and thick, but not suitable for table use. It may be used as bee-food.

ZERO (Brampton-road). — Sample has a slight admixture of honey dew, and is thus inferior for use as table honey.

Special Prepaid Advertisements.

Twelve words and under; Sixpence; for every additional Three words or under, One Penny

Advertisements for current issue must be received by first post on Tuesday.

DRIVEN BEES, with young Queen, 3s. 6d. per lot. Travelling Box returned or charged 1s. Larger lots, 4 to 6 lb. and young Queen, 1s. 3d. per lb. E. GARNER, Broom, near Biggleswade, Beds. C 80

HONEY, splendid Extracted, in 30 lb. tins, 17s. 6d. each, or 4 tins (120 lb.) 67s. 6d. Sections, 7s. doz.; also 28 lb. rather dark extracted (this year's) in 1 lb. tie-over jars, 11s. 6d. to clear. Cash or deposit. R. BROWN, Holly House, Luton. C 83

FIVE FRAME-HIVES FOR SALE. Must sell owing to leaving residence. No reasonable offer refused. RABY, Orchard Portman House, Taunton. C 85

FOR SALE, FOUR up-to-date FRAME-HIVES, stocked with bees (guaranteed healthy), 30s. each or £5 the lot. May be seen by appointment. Must sell. Apply, W. C. STONE, White Ball, Wellington, Somerset.

FOR SALE, 4 STOCKS BEES, £1 each, or £3 10s. the lot. MISS LAXELBY, Hazelmoor, Hall Green, Birmingham. C 88

1904 FERTILE QUEENS. A few to spare at 2s. 6d. W. F. HOSEGOOD, 6, The Waldrons, Croydon. C 92

IMPORTED ITALIAN QUEENS in introducing cages, free 6s. each. E. WOODHAM, Clavering, Newport, Essex. C 79

EXTRACTOR FOR SALE, perfect, standards or sections, 8s.; cash only. F. PORTER, Monby, Louth, Lincs. C 81

WANTED, three Frame Observatory Hive and Cheshire "Bees and Bee-keeping." Particulars to GEARY, Old Hospital-lane, Fosse-road North, Leicester. C 82

40 STOCKS BEES (skeps) FOR SALE, strong, plenty stores, 15s. each; order now. W. WYATT, Junr., Buckland, Chard. C 84

HONEY EXTRACTOR, Abbott's "Little Wonder," with Gear, 5s. HOLLEY, Sherfield, Basingstoke. C 87

WANTED DRIVEN SWARM with young Queen. H. WINTER, Woodside, near Muir, Kirriemuir. C 94

LIGHT EXTRACTED HONEY FOR SALE, 53s. 6d. per cwt., f. o. r., tins and cases free. Samples 3d. CHARLES H. BOCOCK, Ashley Apiaries, Newmarket.

Prepaid Advertisements *(continued)*.

FINE tested 1904 QUEENS, reared from selected workers, hardy and prolific, 3s. 6d. each. Bees 1s. 6d. per lb. for 5 lb. lots and over. Guaranteed healthy and safe arrival. WHITING, Valley Apiaries, Hundon, Clare, Suffolk. C 95.

HEALTHY DRIVEN BEES, ready to despatch now, 4s. per lot. W. H. HIGLEY, Expert, 15, Mason-street, Kidderminster. C 90

TO IRISH BEE-KEEPERS.—Wanted to purchase, pale well-filled New Sections. T. SMITH & Co., Hyde Park, London, W.

HONEY. FOR SALE about one gross first class WHITE CLOVER SECTIONS, well filled in card cases, 8s. 6d. per doz.; glazed 9s. per doz; safely packed, free on rail. Awarded seven 1st Prizes for sections this season. Finest Extracted Clover Honey in 16-oz. screw-cap Bottles, 8s. per doz.; sample 3d. J. TREBBLE, The Apiary, Romansleigh South Molton. C 93

SIMMIN'S DOLLAR HONEY QUEENS, 50 pence; post free. BROOMHAM, Heathfield, Sussex. C 96

BEES FOR SALE, 10 Stocks in Bar Frame Hives, and 10 doz. worked out Shallow Bars. Offers? ROGERS, Heath Apiary, St. Albans. C 55

28TH YEAR. — RELIABLE QUEENS, 2s. 9d., Selected, 5s., in Introducing Cages, delivered. Small Swarms, 5s. 6d. on rail, cases free. ALSFORD, Expert, Haydon, Sherborne. C 59

HEALTHY DRIVEN BEES, with Queen, 5s. Package free. JOHN PHILLIPS, Spetchley, Worcester.

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DON'T BEE STUNG! Use the "Burkitt" Bee Glove. Pronounced success. Very light in substance. Unsolicited testimonials from all parts. Price 2s. 6d. per pair. With self-adjusting Sleeves, 3s. 6d. per pair, Post-free from EDWARD REYNOLDS, Sole Maker, Andover, Hants. Special terms to agents.

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Editorial, Notices, &c.

YORKSHIRE AGRICULTURAL SOCIETY.

SHOW AT HUDDERSFIELD.

The annual show of the above Society was held on August 3 and 4. In the bee department the exhibits were less numerous than usual, owing no doubt to two causes—the late drought and the abundance of honey dew. The exhibits, which entered at both Southport and Huddersfield, came, unfortunately, too late for the latter. This ought to be looked into, as there was an understanding between the Lancashire and Yorkshire Societies that the former would allow the exhibits entered for Huddersfield Show to be removed before the close of the Southport Show. Whose fault was, then, the delay? The packers or the railway companies? The Rev. R. M. Lamb, Burton, Pidsea, judged the bee and honey section, and made the following awards:—

Best Collection of Hives and Appliances.—1st, W. Dixon, Beckett Street, Leeds; 2nd, E. H. Taylor, Welwyn; 3rd, A. C. Jemeison, Dringhouses, York.

Complete Frame Hive.—1st, W. Dixon; 2nd, E. H. Taylor; 3rd, A. C. Jemeison.

Observatory Hive with Bees and Queen.—1st, W. Dixon; 2nd, E. H. Taylor; 3rd, W. Dixon.

Display of Honey, Wax, etc. — 1st, W. Dixon.

Twelve 1-lb. Sections.—1st, W. Patchett, Cabourne, Lincs.; 2nd, A. W. Weatherhogg, Willoughton, Lincoln; 3rd, W. Dixon; r., H. Waddington, Boroughbridge.

Twelve Sections Heather Honey.—1st, W. Dixon; 2nd, J. M. Balmbra, Alnwick; 3rd, H. Waddington.

Twelve 1-lb. Jars Extracted Honey.—1st, W. Patchett; 2nd, W. Dixon; 3rd, W. E. Richardson, Driffield; r., A. Allott, Kexborough.

Bees Wax.—1st, F. Harris, Sibsey, Boston; 2nd, W. Patchett; 3rd, J. Pearman, Derby.—(*Communicated.*)

HENBURY DISTRICT B.K.A.

This Association held its annual show at Henbury on July 27, in conjunction with that of the Henbury Horticultural Society. The honey staged was not equal, either in quantity or quality, to that of last year, especially with regard to colour, dark honey being so prevalent this season, but notwithstanding this there were upwards of 400 entries. During the afternoon bee demonstrations were given by the County Council's expert, Mr. E. J. Burtt of Gloucester, and were much appreciated. Messrs. Jordan and Brown officiated as judges of the honey, and made the following awards:—

OPEN CLASSES.

Trophy of Honey.—1st, Mrs. Waller.

Twelve 1-lb. Sections.—1st, J. Trebble; 2nd and 3rd (equal), E. C. R. White and W. Woodley.

Twelve 1-lb. Jars Extracted Honey.—1st, W. Woodley; 2nd, E. C. R. White; 3rd, B. K. Reece.

Single 1-lb. Section.—1st, J. Trebble; 2nd, E. Hart; 3rd, W. Hatliff; v.h.c., W. Woodley; h.c., A. V. Trebble.

Single 1-lb. Jar Extracted Honey.—1st, W. Rodwell; 2nd, S. P. Soal; 3rd, W. J. Cook; v.h.c., W. Woodley; h.c., E. Hart and W. Hatliff.

Beeswax.—1st, E. C. R. White; 2nd, A. Baker; 3rd, T. George; c., Mrs. Waller.

Queen Wasps.—1st, J. Davies; 2nd, J. Castell.

MEMBERS' CLASSES.

Twelve 1-lb. Sections.—1st, Mrs. Todd; 2nd, S. Butler; 3rd, Mrs. Hignell.

Twelve 1-lb. Jars Extracted Honey.—2nd, A. Baker. (No 1st awarded.)

Six 1-lb. Sections.—1st, A Baker; 2nd, S. Butler; 3rd, Mrs. Todd; c., T. George.

Six 1-lb. Jars Extracted Honey.—1st, Mrs. Todd; 3rd H. Witchell.

Three Shallow-Frames Comb Honey.—1st, Mrs. Todd; 2nd, H. Witchell; 3rd, Mrs. Hignell.

Three 1-lb. Sections.—1st, Mrs. Todd; 2nd, Mrs. Waller; 3rd, T. George; c., S. Butler.

COTTAGERS' CLASSES.

Three 1-lb. Bottles.—1st, Mrs. Stagg; 2nd, T. George; 3rd, C. Thompson.

Three 1-lb. Sections.—1st, T. George; 2nd, C. Thompson; 3rd, J. Baker; c., Mrs. Stagg.

NOVICE CLASSES.

Three 1-lb. Bottles.—1st, E. Hutton; 2nd, T. George.

Three 1-lb. Sections.—1st, T. George; 2nd, E. Hutton; 3rd, J. Baker.

SPECIAL PRIZES.

Silver Medal.—Mrs. Todd, 26 points.

Bronze Medal.—T. George, 19 points.

J. Atkin Waller, Hon. Sec.

LANCASTER AGRICULTURAL SOCIETY.

HONEY SHOW AT LANCASTER.

In connection with the Lancaster Agricultural Society's forty-first annual show, held at Lancaster on August 13, a honey section was this year introduced, and proved a great success. The entries came in far above expectations, some being sent from long distances. It was con-

sidered by several well able to judge to be one of the best shows of the present season. The weather was perfect and the honey-tent attracted a large number of people. Mr. W. J. Ireland, Slyne Nurseries, Lancaster, acted as judge, and afterwards gave two lectures and demonstrations in the bee-tent, and a little boy, seven years of age, greatly surprised the spectators by driving a skep of bees successfully. The awards were as follows:—

OPEN CLASSES.

Six 1-lb. Sections.—1st and 2nd, Isaac Mossop, St. Bees, Cumberland; 3rd, J. Jones, Wegber Quarry, Carnforth; h.c., J. Clay, Wellington, Salop; c., J. Gorst, Heysham, Robert Rymer, Hesketh Bank, Preston, and Thomas Walker, Hawkshead.

Six 1-lb. Jars Extracted Honey.—1st, W. Patchett, Cabourne, Lincs; 2nd, J. Jones; 3rd, James Clay; h.c., Walter Lowe, Rainhill, Lancs; c., W. J. Crook, Market Rasen, and J. Stirzaker, Poulton-le-Fylde.

Six 1-lb. Jars (Dark) Extracted Honey.—1st, J. Stirzaker; 2nd, J. Jones; 3rd, J. Gorst; h.c., Mark Gorst, Heysham; c., Thomas Walker and J. Stirzaker.

Beeswax.—1st, Thomas Walker; 2nd, J. Jones; h.c., J. Gorst; c., Thomas Ireland, Bulk Farm, Lancs.

LOCAL CLASS.

Two Shallow-Frames Comb Honey.—1st, Mrs. T. Taylor, Mill Hill, Lancaster.

Special Prizes for Best Exhibits (County Only).—The Lancashire B.K.A. Silver and Bronze Medals in this class were awarded to J. Jones, Wegber Quarry, Carnforth.—(*Communicated.*)

KENT HONEY SHOW.

In ideal weather, and amid charming surroundings, this exhibition was held on August 10 at Wye. The total entries numbered 175, and the show was visited by over 1,000 people. Lieut.-General Sir Charles Warren sent an interesting exhibit (not for competition) in the form of honey cakes in various designs. Mr. R. Brown, Somersham, Hunts, undertook the duties of judge, and made the following awards:—

Six 1-lb. Sections (County Only).—1st, A. Baker, Betteshanger; 2nd, F. R. Court, Greenstreet; 3rd, Mrs. Dunstan, Wye College; 4th, E. R. Nash, Smarden.

Two Shallow-Frames Comb Honey.—1st, T. Head, Canterbury; 2nd, E. R. Nash; 3rd, S. Darlington, Charing; 4th, S.E. Agricultural College, Wye.

Six 1-lb. Jars Extracted Honey.—1st, A. Baker; 2nd T. Head; 3rd, S. J. Baldwin, Bromley; 4th, F. R. Court.

Three 1-lb. Sections and Three 1-lb. Jars Extracted Honey.—1st, F. R. Court; 2nd, S.E.A. College; 3rd, T. Head; 4th, S. Burden, Headcorn.

Beeswax.—1st, T. Head; 2nd, F. R. Court; 3rd, H. Head, Wye.

Trophy of Bee Products.—1st, E. R. Nash; 2nd, S. Burden.

Mead.—1st, E. R. Nash; 2nd, W. Cook.

Honey Cake.—1st, S. Burden; 2nd, B. Burnham; 3rd, E. R. Nash.

Collection of Bee Flowers.—1st, W. Hills, Kennington; 2nd, Miss H. McGregor, Wye.

Two 1-lb. Jars Extracted Honey (Cottagers).—1st, H. Dobell, Marden; 2nd, Mrs. W. Hann, Wye.

OPEN CLASSES.

Single 1-lb. Jar Extracted Honey (Light).—1st, T. G. Hillier, Andover, Hants; 2nd, T. S. Holdsworth, Kirton Lindsey, Lincs; 3rd, W. F. Fake, King's Lynn, Norfolk.

Single 1-lb. Jar Extracted Honey (Dark). 1st, E. C. R. White, Salisbury; 2nd, T. Head, Canterbury; 3rd, T. D. Dixon, Kennington.

Single 1-lb. Section.—1st, T. G. Hillier; 2nd, A. W. Weatherhogg, Willoughton, Lincs; 3rd, S.E.A. College, Wye.

Frame-Hive.—1st, T. Head, Canterbury; 2nd (equal), S. J. Baldwin, Bromley, and A. E. Allchin, Kennington.

Mr. S. J. Baldwin, Bromley, and Messrs. James Lee and Son, Highbury, London, showed bee appliances, observatory hives, etc.

Lady Gerard distributed the prizes to the successful competitors, and was supported by the Hon. Mrs. Deedes and several gentlemen, including Mr. M. J. R. Dunstan, Wye College, Mr. Alfred Amos, Mr. H. Thompson (Chairman), Mr. J. Tippen (Secretary).—(*Communicated.*)

SHOW AT HELSBY, CHESHIRE.

An exhibition of honey and wax was held in connection with the Helsby Flower Show on Saturday, August 13. Mr. W. Bradburn, Sale, officiated as judge, and made the following awards:—

Six 1-lb. Jars Extracted Honey.—1st, H. Potts, Dutton, Warrington; 2nd, W. Johnson, Trafford; 3rd, F. Wilkinson, Dutton; v.h.c., G. Woolley, Little Budworth.

Three 1-lb. Sections.—1st, Rev. E. Charley; 2nd, O. Dutton, Trafford.

Six 1-lb. Jars Extracted Honey (Local Class).—1st, W. Jahnson; 2nd, J. Rowland, Clifton, Runcorn; 3rd, Miss Milligan, Frodsham.

Beeswax (not less than 1 lb.).—1st, H. Potts; 2nd, Rev. E. Charley, Ince.—(*Communicated*).

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[5616.] Preparation for winter and beyond ought to occupy the thoughts of the southern bee-keeper. After removing all surplus chambers the contents of the brood-combs should be examined, and where stores are getting short feeding will be required to the proper weight needed for winter. This should be given rapidly and at once; the bees will then seal it over. The incoming food will also start brood-raising to some extent, and thus increase the number of young bees in the hive, bred late enough for early work next spring. In September also if queens are getting aged or worn out young fertile queens should be procured and introduced and the bees fed rapidly as before advised. With stocks well stored I recommend that a little slow-feeding be continued for a few days when new queens are given; this will keep the colony in good heart and stimulate brood-rearing at once. Only general hints can be given, as each apiary usually requires some special attention. For instance, the bees may possibly have re-queened themselves during the breeding season. I should not, however, advise retaining queens except under special circumstances beyond the second season's work, as a waning queen next year may spoil the season's surplus, as only strong stocks can store in the supers for their owners.

Foreign Queens.—I have received several letters asking my opinion as to the desirability of introducing foreign queens. To such questions I cannot give an opinion of much value not having ever tried them. My strain of English bees are quite good enough for me. Results year after year are the test. I judge by my successful and profitable bee-keeping, which has been built up on their good working qualities and general all-round merits.

Foul Brood. — Now that Parliament is prorogued this subject will have to stand over a while, but that is no reason why we should not discuss its provisions and suggest improvements for future use if British bee-keepers really require a Foul Brood Bill. Some of our experts speak up pretty strongly in favour of compulsory powers, but if we look at the matter broadly one cannot avoid the thought that possibly "experts" in the past may have helped to spread the disease in passing from apiary to apiary on their "tours" among bee-keepers. The late Mr. F. Cheshire considered the disease so infectious that in one of his lectures I believe he went so far as to say that he thought it possible for a bee from a diseased stock to deposit germs on flowers when foraging to be carried off by the next bee from a healthy hive, and thus infect the latter. Though possible, this is not in my opinion probable: but, without the greatest care on the part of experts, there must be great risk after overhauling an apiary reeking with foul brood. Personally, I should not care to rub shoulders with a nurse or attendant just come out of a smallpox hospital, nor would I willingly allow an "expert" to examine my bees after visiting infected apiaries, even though miles away. "Experts," I see, wonder why some bee-keepers do not require their services, and throw out sinister suggestions as to the reasons for this. May I without offence suggest that it is like "teaching one's grandmother how to suck eggs," seeing that the bee-keepers may know how to manage their bees as well as the "expert"? If one of the latter armed with "compulsory powers" came to examine my bees I should only consent on condition that I received compensation if foul brood broke out in my apiary after his visit. Why, his clothes and tools may contain millions of spores or germs of the disease. This is so serious a matter for a bee farmer whose living depends on his bees that, in my opinion, an expert, after overhauling foul broody hives, should be thoroughly disinfected, aye, and altogether isolated from bees for some time before resuming his work.

Prize Honey Exhibits.—A Scotch bee-keeper writes me, asking for a "note" on this subject. I presume sections are meant, as he refers to filled-out sections. On this point I must refer him to Mr. Weatherhogg for the method of getting sections built out to the wood all round. I have used full sheets of foundation, had my hives perfectly level and crowded to overflowing with bees, honey coming in rapidly; in fact, have had everything in good order for the production of perfect sections, yet I have not secured one "perfectly filled" section in a thousand. I may have hundreds of first-class quality, but not filled out completely without a single "pop-hole" at the corner, as Mr. Weatherhogg gets his sections filled. The only chance my Scotch friend will have of taking first will be when our judges sample the quality of the honey as of yore.—W. Woodley, Beedon, Newbury.

FOUL BROOD LEGISLATION.

[5617.] So much misconception still exists as to the scope and provisions of the Bee Pest Bill that it seems worth while once more to consider the objections raised by writers in this journal. In the first place, the scheme is no new one sprung upon the bee world. It was argued out and well considered when brought forward in 1896, so that bee-keepers of any standing must be conversant with the main points. Secondly, only those apiaries known, or reasonably suspected, to be infected will be liable to compulsory examination. I must apologise for reiteration, but it seems as if some correspondents are determined not to understand. Thirdly, the working of the Bill will be in the hands of the county councils, and these bodies may surely be credited with a desire to exercise their powers for the benefit and convenience of all concerned. To take a lower, but perhaps more practical, view, they are publicly elected, and can have no possible interest in making things unpleasant. They will no doubt be guided by the best advice obtainable, whether from associations or individual bee-keepers. Why, then, imagine that they will insist upon or even authorise inspections at the most inconvenient of seasons, as when supers are piled up for the honey flow!

Mr. Woodley's suggestion that experts may spread infection has at first sight some force; but this danger is recognised by all intelligent bee-keepers, and is, or should be, provided for by all associations worthy of the name. It is adequately dealt with in the instructions for experts adopted and issued by the B.B.K.A., and the owner of an apiary inspected can see for himself whether or not the instructions are complied with, and can call the attention of the authority administering the Act to any breach of them. Experts cannot fail to realise the importance of the specified precautions, and, as a matter of fact, experience shows that they are exceedingly careful, and, as a rule, give general satisfaction.

To argue, as some have done, that because the working of the Foul Brood Act in Canada has failed to answer expectations it would be rash to introduce a similar Act into this country, shows a want of appreciation of the facts. The view of the disease taken by the Government Inspector of Foul Brood in Ontario differs widely from that of scientific and practical English bee-keepers. He does not confine the bees of a diseased stock. He merely shakes them from their combs, which he destroys, and allows them to run back into their empty hive, where he puts them on frames with foundation "starters," and allows them to build comb for four days. This he then takes from them and destroys, leaving the bees to build afresh. The cure is undertaken in the honey season, and the bees find their own honey. Mr. McEvoy is entirely opposed to the use of drugs of any kind. When feeding must be done he uses plain sugar-syrup, and he *does not think it necessary to disinfect hives.* By means of this treatment he has succeeded in effecting many temporary cures; but can we wonder that there are complaints from Canadian bee-keepers that the disease continues, and is constantly springing up again?

On the other hand, when we find such conscientious and experienced bee-keepers as Messrs. Root, the editors of *Gleanings*, and Mr. Doolittle strongly urging the introduction of Foul-Brood Acts into State after State, we need trouble our minds no longer as regards the salutary action of compulsory legislation in the United States, where the conditions of agriculture are not so different from those of this country as some would have us suppose. It is true that there we find huge apiaries, and that under favourable conditions of climate, long duration of honey flow, a protecting tariff, and a good market both at home and abroad, the owners of these apiaries manage to thrive to an extent impossible on our side of the Atlantic; but in the United States, as here, the great majority of the apiaries are small, and their owners have other means of earning their livelihood. It is probably against these less enlightened bee-keepers that legislation is directed.

The real difficulties in working the scheme before us will be, as usual, financial, coupled with, in many countries, the want of a well-directed association to work in combination with the county council. As regards money, it is hoped that the working of the Act will even at the outset not be very costly, and will certainly speedily diminish. The funds must be obtained from the rates, and if the county councils will sanction the expenditure, they will get better value for it than is often the case. It is, however, our interest as bee-keepers to keep the expenditure as low as possible; and, in spite of Mr. Saunders's arguments, I strongly hold that the sum of 5s. per hive as compensation should never be exceeded. To say that the proposed 10s. will be only the *maximum*, and will rarely be awarded, is well in theory, but not much to the point in practice, for to draw distinction between the various cases would be an invidious task; and it needs but a small knowledge of human nature to foresee that the maximum would generally be awarded.

The working of the measure in detail presents undoubted difficulties, which,

however, may be left for discussion when the Act has been passed, and the time comes to deal with it. The essence of Mr. Saunders's proposal was that the Bill should be passed cheaply as an unopposed Government measure; and whether it be taken up by the present or by a future Parliament, the condition remains paramount, in view of the general poverty of our associations. We could never dream of fighting a Bill through Parliament. Hence it is obvious that serious opposition on the part of any one association, or of any group of bee-keepers, at once renders legislation impossible. Even a passive attitude will prevent success, seeing that Government will not move in the matter unless pressed to do so by a decided majority of the county councils. I would urge those bee-keepers who object to the Bill on personal grounds, for fear of being inconvenienced, and for objections which in reality are in many cases purely imaginary, to take a larger view, and to consider what will be best for the industry in general. The present movement is based on a desire to do some real practical good. Our associations—parent as well as offspring—have for the last thirty years been occupied mainly in education, by means of shows, lectures, experts' tours, etc. They have spread the light; but the range of the brightest light is limited, and so far I have heard of no satisfactory device for sending the rays through a brick wall. I doubt if many readers of this journal are aware how small a proportion of bee-keepers is affected in each county by its associations. Probably the average strength of the associations is not over 300. In Devon our number last year was 333, and the number of apiaries was estimated at 2,000. Our experts actually visited 1,794. Very few associations make many visits outside their body of members; but as, in all probability, there is less disease to be found in the apiaries of the well-instructed, an idea can be formed of the state of things outside. Some correspondents of the B.B.J. appear to wish to ignore the extent of disease. In the half of Devon inspected this year by our experts, 17 1-7 per cent. of the apiaries are recorded as diseased. Owing to bad weather and other difficulties, such, for instance, as having to deal with skeps, this is admittedly an under-estimate; it would be quite reasonable to take the percentage as 24. In Cumberland, where only 781 apiaries were visited, the percentage was 24. I have not just now the means of examining other reports; but I have no doubt that if facts could be properly ascertained, and all out-of-the-way apiaries visited, the general percentage throughout the country would be still higher.

If this is the result of thirty years of "spreading the light," how many more generations must pass, under our present system, before foul brood shall have been beaten down? I cannot help thinking that those who have spent most time and trouble in fostering associations will be asking themselves, as I do, whether it is worth their while to struggle on in face of the apathy shown by so many bee-keepers when called upon to unite for the common good.—H. J. O. Walker, Lieut.-Col., Budleigh Salterton, Devon, August 15.

THE FOUL BROOD BILL.

[5618.] There is no doubt but that compulsory powers are necessary to deal with offenders such as Mr. J. Herrod mentions on page 324 of B.J. of last week. My opposition is not to a foul brood Bill *in toto* but only to such clauses as would be annoying in carrying them out. I am told that the Bill being promoted by Mr. Saunders makes it clear that the inspector shall not have power to enter an apiary unless he has reasonable grounds to suspect foul brood. That being the case, my objections to it disappear. If I had foul brood in my apiary I should certainly call the inspector in, but so long as I know my bees are healthy, I have no desire to have my apiary upset. The Bill appears to grant this principle of exemption for which I am contending, and for which I will contend.—W. J. Farmer.

FOUL BROOD INSPECTION.

THE PRACTICAL SIDE OF THE QUESTION.

[5619.] May I suggest that your correspondents who write in opposition to this subject should bear in mind the practical side? From this standpoint I ask:—Who has the imagination or presumption to suppose that inspectors, if appointed and armed with compulsory powers, would pull hives about that had four or five supers thereon in an apiary of two hundred stocks? I call that rather a far-fetched and unlikely "case in point." Personally, I should glory in having the disease among my bees if accompanied by such conditions as these! It is sufficient evidence for any one who knows his business to pronounce an apiary healthy when supers are seen on each hive, and plenty of bees are pouring in and out in a business-like fashion. I believe the Bill may be made practical by leaving all cases to the discretion of the inspector, who, no doubt, would be a qualified person, and whose actions would be open to criticism and censure, if they betrayed ignorance or worse. Replying to Mr. Woodley (5607, page 313), I say most certainly the inspector ought to be compelled to disinfect everything about his

person and clothing likely to spread the disease. On the other hand, the inspector should not overhaul any more hives himself than necessary, but cause the owner to make a thorough examination of all his stocks in the interest of the craft; the inspector to stand by giving instructions. It is the laggard bee-keepers and obstinate "disease-spreaders" that this Bill is primarily meant to affect. But so far as "wiping out the disease" entirely, either in Canada or England, it is to my mind almost impossible; but it may, however, be reduced very much, as many infectious diseases are. Although these diseases have the help of a strict law, they are not yet obliterated off the face of the land, and who can venture to say they ever will be?—T. W. SWABEY, Lincs., August 16.

QUEEN MATING.

[5620.] On Thursday, July 21, I witnessed the act of copulation between a queen and drone, and I wish to record the facts in your journal as witnessed by myself. It was about 2.30 in the afternoon I was standing near a mating nucleus-box filling a feeder when my attention was attracted by extra loud buzzing, as of drones flying. I turned and saw a queen on the wing evidently making for the mating-box mentioned above. She was closely followed by two drones, one of which turned and flew away, but the other remained in hot pursuit of the queen. They were not eight inches from the ground, and the act of mating took place not over twelve inches from the grass. It was all done so quickly that I marvel at it. I will try to explain each motion in order. Both queen and drone were flying very rapidly in a straight line when, as quick as a flash, the drone made two rapid circles round the queen as though to hinder her flight. As the drone encircled the queen she rose slightly each time and directly the last circle was made by the drone he flew at her with body bent about like that of a worker when intending to sting, and his wings rattled in the same manner. The queen flew in the usual way when out for the purpose of mating, but perhaps she was flying more swiftly. Directly the drone came in contact with the queen there was a sudden lurch to the side and they went together off into the adjoining field where I lost sight of them. As the queen and drone flew together they much resembled workers when attempting to jointly carry off their dead in the spring. A queen is swift of wing, but a drone is ten times swifter. Of this I am convinced. I remained by the mating-box from which the queen evidently came perhaps three minutes when I saw a queen enter with the evidence of having met a drone. I still continued to watch the entrance of the box and soon saw a worker bear out the tell-tale white speck. I afterwards opened the mating-box and saw the thread-like attachment to the queen, while a few days later, on again examining, I found the queen laying nicely.—SWARTHMORE, Pa., U.S.A., August 9.

A CURIOUS WASPS' (?) NEST.

[5621.] I came across an interesting specimen of what I take to be a wasps' nest, which to me was a very unusual one. It was found in an unused fowl roost, fastened to the roof, where the side and roof met. The nest appeared to be made of a wax and vegetable mixture. It was constructed in the form of a globe, and had a small aperture at the base. After stoving the insects inside out (and what a remarkable tenacity of life they have!), I examined it more closely, and found the material it was made of wrapped round and round as we might wrap a length of ribbon round to form a ball. Inside there were two combs, and also live insects, so having thought for my bees, I plunged the whole nest into hot water to make an end of it, and found the substance the nest was built of collapsed. The thing was so novel to me that I write asking your opinion of it. Do wasps generally build such nests as these, hidden away in holes where our prying eyes cannot see them?—JOHN H. HOUGHTON, Birmingham.

[If a specimen of the insects referred to is sent we will no doubt be able to tell you whether they belong to bee or wasp families.—EDS.]

Queries and Replies.

[3528.] *Driving Bees in Autumn.*—I possess a copy of the "Guide Book" and have been a constant subscriber to your valuable journal for almost three years, but have so far failed to see any mention of directions to suit my present case, particulars of which are as follows:—In June I had a very strong swarm, and not having a frame-hive to spare just then, I hived them in a large skep. The bees did well and the skep is now very heavy, and as I do not want more stocks I have offered the said bees to a friend for uniting to a weak stock headed by a valuable queen. We propose to drive the bees about September 18. 1. Do you think this too late for uniting? The bees would be fed liberally for a fortnight after uniting them. 2. I suppose it will be best to drive the bees into another empty skep in order to

catch and remove the queen, but it will be difficult to catch her in such a strong colony, so if unsuccessful ought I to re-drive the bees in order to secure her? 3. When the queen is caught I propose to shake the bees out on a board in front of frame-hive and sprinkle them with a little essence of peppermint as they run in, also removing frames with bees on them, and sprinkling them same as above. Am I right in this? 4. In "driving" is it necessary to tap the skep before you turn it upside down to hive?—J. H., Aldershot, August 16.

Reply.—1. Autumn is a very good time for uniting. 2. If the queen is not seen and caught as the bees pass up into the empty skep, she must be sought for among the driven bees. Should you not have seen how a queen may be readily found by searching among the driven bees you had better throw them out in small lots on to a board and let them run into an empty skep wedged up in front. This will afford a good chance to capture the queen as she enters. 3. Bees must on no account be sprinkled with "essence of peppermint." Do not even use syrup so scented. Dust the bees well with flour from a dredger as they run in. 4. The "Guide Book" (which you have) gives full information on driving and uniting bees, but judging from the questions asked above, we should advise you to try and get a little help from some one who has seen bees driven and united.

[3529.] *Are Weak Stocks Worth Requeening?*—As an old bee-keeper and subscriber to your valuable paper, may I ask your advice respecting the following points:—1. The enclosed comb is taken from the brood-nest of a neighbour's hive. What is the cause of the young brood dying in the cells? 2. What is the peculiar red proboscis? I believe I saw two or three bees on the alighting-board round a young bee and pulling at its proboscis, which was taken away. 3. Is the comb fit for use, or ought it to be renewed by destroying and replacing with full sheets of foundation? 4. The old queen was apparently getting worn out, being at least her third season, so I destroyed her a fortnight ago, and now I find three queen-cells capped over. There are plenty of drones in the hive. I thought this to be the best course, especially as the stock was very weak and no surplus had been gathered. Did I do right? 5. Yesterday the bees all clustered outside the hive, and I observed signs of robbing, so closed entrances to 2 in. and placed glass over entrance. I smoked the bees back again. Was I right?—J. S., Bramhall, August 16.

Reply.—It seems as if brood had died from lack of bees to maintain the necessary warmth. 2. The protruding proboscis is common when bees have died an unnatural death. It is also a frequent occurrence to see bees "pulling at the proboscis" as you term it—when robbing is going on. 3. Comb being black and old needs renewing. 4. The stock being "very weak," it was hardly worth troubling about requeening, save as a matter of curiosity to see if a queen is reared and mated, which we very much doubt so late in the season. 5. It is evident that things are all wrong inside the hive, and it may be taken for granted that the stock will come to an untimely end.

[3530.] *Alien Queens and Foul Brood.*—In October last I purchased some pure Italian queens from a breeder who advertises in your journal. They arrived at end of the same month, and I sent one of them to a customer of mine. When the association expert examined the hive containing this queen in the following April, he said the stock was "simply rotten with foul brood," and the blame was attributed to the queen I had had supplied. Do you think that a queen introduced so late in the season as this one was could possibly cause the stock to be in the condition stated by April? I shall be glad of your opinion, as it is a damaging thing to imply that the breeder in question would send out diseased queens. I may also say that I had several other queens in the same parcel and these are quite healthy. I enclose name and address and sign myself—N. D.

Reply.—It is, of course, "possible" that a good deal of brood-rearing may have been started before the alien queen ceased ovipositing for the year, but the probability is that the "expert," in using the words in question, has overstated the case. "Rotten with foul brood" is a common phrase among experts, and should not be taken too literally, because it takes a good few months to reduce a stock of bees to that condition in its full sense.

[3531.] *Bees Overloading Combs with Pollen.*—Will you be good enough to tell me why it is that bees fill so much of some combs with pollen which they do not seem to require? This evening I opened one of my hives and found no less than four combs more than half-filled with pollen, the remaining portion of the combs being full of sealed honey, and not a single cell in the four combs empty. The hive referred to contains fifteen frames, all of them, excepting those four, being full of brood and honey. I therefore ask:—1. Do you advise the removal of those pollen-choked frames, or will the bees be likely to use the pollen later on? The queen is extremely prolific, and would, no doubt, prefer empty cells in which she could lay. 2. If I were to unite a few lots of driven bees a fortnight hence and give them

frames of foundation, would it be too late for them to work them out? I should be able to spare them three or four frames of brood from other stocks. Thanking you in anticipation, also for past favours, I send name and sign myself—BEE-MAN, Chester.

REPLY.—1. The cause of pollen-choked combs can only be explained by the supply exceeding the demand at the gathering-time. If honey is scarce and pollen very plentiful for a few weeks in spring the result is—as in your case—a superabundance of pollen. Therefore, when combs are nearly full of pollen the usual course is to do away with them as being worse than useless. 2. We never advise giving driven bees too much comb-building to do in autumn; they should, if possible, be hived on three or four frames of built-out comb, and have as few combs to build out as possible.

[3532] *Moving Bees.* — I have to move some bees to the Midlands at Michaelmas next, and I should like a little advice. They are at present in "the 20th century hives"; but to facilitate moving I thought of making some boxes similar to body-box of "W. B. C." hive, and making for each a frame to fix above top-bars, covered with perforated zinc for ventilation as advised in "Guide-Book." But I should first like to know: 1. Would these boxes be suitable? 2. Should I have to put any zinc in the bottom? 3. Is Rugby very suitable for bee-keeping? An answer in either JOURNAL or *Record* will oblige.—A READER.

P.S.—I might also add that I have been a reader since I began bee-keeping about two years ago of both JOURNAL, *Record*, and "Guide-Book," and have found them very useful—in fact, I should never have got on without them.

REPLY.—1. Quite suitable, and with a frame above top-bars as proposed, the bees will take no harm from over-heating. 2. As the boxes will need a rough, temporary floor-board for travelling, a 4 in. hole should be cut in each and covered on *upper side*, with perforated zinc for bottom ventilation. 3. We are not well acquainted with the bee-forage about Rugby; perhaps some reader better informed than ourselves will kindly reply to this query.

[3533] *Dark Honey as Bee-food.*—As a subscriber for some few years to your valuable journal, I should be glad of your advice on the following questions:—A bee-keeping friend having a large quantity of very dark (almost black) honey was thinking of utilising it for feeding up stocks for the winter. I therefore ask: 1, Do you think this would be injurious to the health of the bees? 2. If not, what quantity of water should be added to make it usable as syrup-food? I send name and sign—J. R. M., Lincs, August 11.

REPLY.—1. Honey as described may be utilised as bee-food. 2. It need only be thinned down to the consistency of sugar-syrup used in autumn by adding hot water as required.

[3534] *Ripening Honey.* — I have this year a lot of sections, in which there is a good deal of honey not sealed. I intend to extract this honey, which, being unripe, will not, I suppose, keep good. Can you give me some information as to ripen it on a small scale, as I do not possess the appliance known as a honey-ripener. The information would, no doubt, be useful to many besides myself.—HOLYWOOD, Belfast.

REPLY.—There is no method we know of for ripening thin unsealed honey except by using the appliance made for the purpose. The principle embodied in the latter is to allow the unripe honey to pass over a heated surface in order to get rid of the superfluous moisture, and by that means improve the consistency and prevent fermentation. Any adaptation of the above principle that can be applied in simple form may serve the purpose in some degree; but we must leave to those who need a home-made ripener to find out the best means of doing it. We cannot suggest a plan.

[3535] *Wintering Driven Bees.* — Would you kindly let me know if I am doing right? I have driven two skeps for a friend, and got the bees for the trouble. So after making up a temporary hive from a box I had by me, and putting both lots in it, I filled it with frames and tied some of the combs in them. There are seven frames in all (standard size). I intend to make a proper hive this winter in which to hive them in the spring. I shall, of course, have to feed them all the winter. Do you think they will come out right? I should like to tell you of a rather lucky thing that happened to a bee-keeping friend of mine last year: — He lost all his bees through starvation, but he never troubled to move the hives indoors, and, in fact, thought no more about them, till one day last May he noticed bees flying in and out of one hive, and thought it was stranger bees intent on robbing, but on closer inspection found that a swarm had taken possession and were doing very well in their new-found home. I send name, and sign—STARTER WITH BEES, Cowley, Oxon.

REPLY.—If well fed and cared for, the bees may do well. There will be no difficulty in lifting the frames into the new hive in spring so long as your frames are made to fit accurately.

Bee Shows to Come.

August 27.—Twelfth Annual Show of the South of Scotland Bee-keepers' Association.

August 27, at Barnton, Northwich.—In connection with the Barnton Horticultural Society.

August 30, at Cartmel, Lancashire.—Honey show in connection with the 32nd Annual Show of the Cartmel Agricultural Society. **Entries closed.**

September 3 to 10, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders' (12th) Annual Exhibition and Market. Numerous classes and liberal prizes for comb and extracted honey and beeswax. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad-street, London, E C.

September 17 to 24, at the Agricultural Hall, London.—Honey Show in connection with the twelfth Annual Exhibition and Market of the Grocery and Kindred Trades. Numerous classes and liberal prizes for comb and extracted honey and beeswax. **Open to all British Bee-keepers.** Schedules from H. S Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad-street, London, E.C.

Special Notice.—In connection with above Shows there will be a *Working Exhibit* illustrative of modern Bee-keeping and Honey-production, including *Demonstrations* with *Live Bees* and extracting honey from combs for sale by skilled experts. (See large advt. p. v.)

September 13, at Woodstock.—Honey Show of the Oxfordshire Bee-keepers' Association in conjunction with the Woodstock Agricultural and Horticultural Association. Open classes for single 1-lb. section, and single 1-lb. jar extracted honey. Prizes 7s. 6d., 5s., and 2s. 6d. (entry free). Schedules from H M. Turner, Hon. Sec., The Turl, Oxford. **Entries close September 10.**

September 14 and 15, in Waverley Market, Edinburgh.—Eleventh Exhibition of the Midlothian B.K.A. in connection with that of the Caledonian Horticultural Society. Twenty-four classes, with good prizes, for honey and beeswax, including seven open classes (three prizes in each). Schedules from W. Reid, Secretary, Heriot, Midlothian. **Entries close September 7.**

September 14 and 15, at Derby.—Derbyshire B.K.A. Twenty-third Annual Show of Hives, Bees, and Honey on the show ground of the Derbyshire Agricultural Society. Five open classes for honey, and collection of bee-appliances. Schedules from R. H. Coltman, Hon. Sec. D.B K.A., Burton-on-Trent. **Entries close September 3.**

September 15, 16, and 17, at Crystal Palace.—Surrey Bee-keepers' Association Annual Exhibition of Bees, Honey, Wax and Appliances, &c. Twenty-five classes (ten open to all). Increased prizes and medals, Schedules from F. B. White, Secretary, Marden House, Redhill, Surrey. **Entries close September 1.**

October 4 to 7, at the Agricultural Hall, London.—Show of Honey and Bee-produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, &c., including the valuable Silver Challenge Cup of the B.B.K.A. Schedules from Mr. Wm. C. Young, Secretary, 12, Hanover-square, London, W. **Entries close September 5.**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

A correspondent, dating from Yorkshire, writes as follows: "A friend of mine had three stocks of bees left in his garden two or three years ago, and tells me that I can have them for fetching away; but as it is in Berkhampstead, Hertford, the cost would be too much. I therefore ask if you can tell me the name of any bee-keeper in the district whom I might ask to pack the hives safely and send them on? My friend dare not touch the hives, as he is afraid of bees." If any reader is willing to help in the way asked, we will be glad to have a postcard to say so.—[EDS.]

A. J. RIDLEY (Sussex).—*A Foul-Brood Law Wanted.*—Whatever there may be in your theory with regard to laws for dealing with foul brood, it is simply giving your case away to suggest that bee-keepers be compelled to pay a tax of 7s. 6d. per hive for the privilege of keeping bees.

S. H. (London, E.C.).—*Transferring Bees from Box.*—You can, of course, transfer the stock to a frame-hive by cutting out the combs and tying them into frames of the latter with tapes; but our advice is to leave the bees where they now are and let them transfer themselves in spring to the new hive by working below on to full sheets of foundation.

J. F. L. (Warrington). — *Undeveloped Brood Cast Out.*—There is no cause for alarm when bees cast out an odd larva or two in the pupa stage of growth, as sample sent.

W. N. M. (Barrow-in-Furness).—*Membership of County B.K. Association.*—Mr. J. F. Williamson, 7, Cyprus Terrace, Fleetwood, is Hon. Sec. of the Lancshire B.K.A. In our monthly, *The Bee-keepers' Record*, the names, etc., of all county secretaries appear in every issue.

PERPLEXED (Ormskirk).—*Sugar Samples.*—The white crystals (if pure cane) are most suitable for bee-food.

Honey Samples.

THORNE (Chesterfield).—Except for its being rather thin, your sample is very good in all respects. There is nothing special in the flavour to define its source, but we judge it to be mainly from clover.

F. H. (Neath).—Both samples are good honey, but it does not afford a fair chance of judging quality for showing to send an ounce or so of liquid extracted honey in small tin boxes. Colour and brightness cannot be accurately judged in such packages. We prefer the sample marked No. 2 for flavour, though No. 1 is rather more dense in consistency.

KUTTA (North Wales).—Sample sent is almost wholly honey dew. It is, of course, quite unfit for table use. You are, however, to be congratulated in hav

ing so good a result in taking "63 beautifully-fitted sections of good honey from same hive" in July, to compensate for the ill-luck later on.

D. S. (Roseneath).—Section of honey reached us smashed into a pulp. It seems to be entirely honey dew and, as such, is quite unsalable.

HONEYDEW (Yorks).—Sample is almost entirely honeydew, and, as such, is suitable for bee-food, but for no other purpose, unless it be in the manufacture of blacking.

H. H. (South Wales).—Sample marked A is best, but there is not much to choose between them, while both show signs of granulating, and will need slightly heating in warm water to brighten the honey for showing.

Suspected Combs.

WELSHMAN (Abergavenny).—To transfer such combs as sample sent from a skep to frame-hive betrays a woeful ignorance of the nature and appearance of foul brood. The comb is reeking with disease, and instead of wasting time in using remedies for curing as proposed, we should burn the frames, combs, and bees without delay. The frame-hive will then need thoroughly disinfecting before using again. When sending samples of comb, letters should be put outside box. Yours was unfit for reading owing to its being put inside along with comb.

H. H. K. (County Cavan).—No foul brood in comb.

WEALD OF KENT.—Both samples very badly diseased. Cells putrid with foul brood.

REX (Som.).—We find no foul-brood in sample. Your second sample is nearly white—not "brown," as stated—and may be cane, but we should prefer the whitest kind.

*** *Several Letters and Queries are unavoidably held over till next week for lack of space.*

Special Prepaid Advertisements

Twelve words and under; Sixpence; for every additional Three words or under, One Penny

Advertisements for current issue must be received by first post on Tuesday.

GUARANTEED healthy DRIVEN BEES, with young Queens, 3s. 6d. lot, or 1 . 3 l. per lb. WITHYCOMBE, Builder, Bridgwater. D 5

YOUNG QUEENS, 2s. DRIVEN BEES with Queen, 4s. 6d. Packages free. ROLLINS, Stourbridge. D 3

STRONG STOCKS in Skeps, plenty stores 1904 Queen 12 . 6d. 13 . 6d. Ditto, on Standard Frames, guaranteed healthy. Honey Strainer, 8s. Honey Press, 4s. Perfect condition. Exchange Honey. Orders booked for Driven Bees, 5s , 6s. per strong stock, with Queen. Fertil Queens, 2s. 6d. W. WOODS, Normandy, near Guildford. D 2

DRIVEN BEES FOR SALE, 3s. 6d. per lot. Guaranteed healthy. WOODING, Sutton, Beds. C 97

Prepaid Advertisements (*continued*).

FINE tested 1904 QUEENS, reared from selected workers, hardy and prolific, 3s. 6d. each. Bees 1s. 6d. per lb. for 5 lb. lots and over. Guaranteed healthy and safe arrival. WHITING, Valley Apiaries, Hundon, Clare, Suffolk. C 95.

STOCKS.—Seven healthy Stocks, six in early new rst quality ives, one in Skep with wint r stores, several section - bo es clearer, sm ker, and other accessories, £8 the lot. Buyer must pack and dispatch. ROGERS, Kooringa Cottage, Warlingham, Surrey. C 98

DRIVEN BEES, with Queen, 1s. 3d. lb. or 3s. 6d. per lot. BARNES, Burwell, Cambs. D 7

28TH YEAR.—YOUNG TESTED QUEENS, in introducing cage, delivered, 3s. 9d. Small SWARMS, with young tested Queen, 5s. 6d., cases free. ALSFORD, Expert, Haydon, Sherborne. D 6

FOR SALE, Full Size CYLINDER EXTRACTOR as new, 15s 6d., cost 21s. ; 1 cwt. Ripener and Strainer, as new, 10s ; 4 Honey Tins, 56 lb., new 1s. 3d. each. AVERY, Deverill, Warminster. D 4

TWO new LAWN MOWERS, 8 and 10 in. easy running, splendid cutting machines, 18s. and 20s. G. LEDGER, Weybridge. D 1

WANTED, SECTIONS and LIGHT EXTRACTED HONEY, in bulk, also in Shallow Frames, delivered in London, any quantity taken. Price and particulars to HERROD & STEWART, "W.B.C." Apiary, Luton, Beds.

DRIVEN BEES, with young Queen, 3s. 6d. per lot. Travelling Box returned or charged 1s. Larger lots, 4 to 6 lb. and young Queen, 1s. 3d. per lb. E. GARNER, Broom, near Biggleswade, Beds. C 80

HONEY, splendid Extracted, in 60 lb. tins, 17s. 6d. each, or 4 tins (120 lb.) 67s. 6d. Sections, 7s. d z.; also 28 lb. rather dark extracted (this year's) in 1 lb. tie-over jars, 11s. 6d. to clear. Cash or deposit. R. BROWN, Holly House, Luton. C 83

IMPORTED ITALIAN QUEENS in introducing cages, free (s. each. E. WOODHAM, Clavering, Newport, Es ex. C 79

LIGHT EXTRACTED HONEY FOR SALE, 53s.6d. per cwt., f. o. r., tins and cases free. Samples 3d. CHARLES H. BOCOCK, Ashley Apiaries, Newmarket.

HEALTHY DRIVEN BEES, ready to despatch now, 4s. per lot. W. H. HIGLEY, Expert, 15, Mason-street, Kidderminster. C 90

TO IRISH BEE-KEEPERS.—Wanted to purchase, pale well-filled New Sections. T. SMITH & CO., Hyde Park, London, W.

SIMMINS' DOLLAR HONEY QUEENS, 50 pence; post free. Broomham, Heathfield, Sussex. C 96

BEES FOR SALE, 10 Stocks in Bar Frame Hives, and 10 doz. worked out Shallow Bars. Offers? ROGERS, Heath Apiary, St. Albans. C 55

HEALTHY DRIVEN BEES, with Queen, 5s. Package free. JOHN PHILLIPS, Spetchley, Worcester.

GUARANTEED good EXTRACTED HONEY, in 14 lb. tins and upwards. Sample 3d. DAVID HANCOX, Deddington, Oxon. C 87

SECTION GLAZING.—LACE PAPER, in neat patterns; White, 1 in. wide, 100 7d., 300 1s. 6d., 500 2s. 4d., 1,000 4s. 6d. ; Pink, Green, and Blue, 1 in. wide, 100 8d., 300 1s. 9d., 500 2s. 9d., 1,000 5s. LACE BANDS (lace both sides), 2⅞ in., 3 in., and 3½ in. wide; White, 100 1s. 3d., 200 2s. 4d., 300 3s. 3d., 500 4s. 6d ; Lace Bands in Pink and Green, 100 1s. 6d, 300 4s. 3d., 500 6s. All post free. W. WOODLEY. Beedon, Newbury.

DON'T BE STUNG! Use the "Burkitt" Bee Glove. Pronounced success. Very light in substance. Unsolicited testimonials from all parts. Price 2s. 6d. per pair. With self-adjusting Sleeves, 3s. 6d. per pair, Post-free from EDWARD REYNOLDS, Sole Maker, Andover, Hants. Special terms to agents.

CUTLERY from the Warehouse to the Home. Razors, 1s., 1s. 6d., 2s. each. Scissors, 5in., 6in., 7in. long, 1s. 6d., 1s. 9d., 2s. 6d. each. Ladies' Cutting-out Scissors, 2s. 6d. each. Nail Scissors, 1s. 4d. each. Pruning Knives, 2s., 2s. 6d. each. Pruning Scissors, 5in. long, 2s. 2d. each. Table Knives, Dessert Knives, 16s. and 14s. per doz. (Beef-carver, Knife, Fork, Steel, 6s 6d.) white handles. Cash with order. GEO. CRESWICK, Smaithing Apiary, Ranmoor, Sheffield. C 43

DRIVEN BEES, 3s. 6d. per lot, delivered at once. Orders cash. Delivered rotation. Boxes returnable. Order early. T. PULLEN, Ramsbury Hungerford. C 91

Editorial, Notices, &c.

A UNIQUE BEE EXHIBITION.

BEES AT THE AGRICULTURAL HALL.

It is gratifying to note that a good deal of interest is being aroused among bee-keepers located within easy reach of town in the forthcoming bee demonstrations announced to take place at the Agricultural Hall on Saturday next, and every day during the following week.

A "working exhibit" illustrative of modern bee-keeping, with the most up-to-date methods of honey-production and preparing bee-produce for market, is just what the bee-keeper not well acquainted with such work is desirous of seeing in operation, and this, in its fullest sense, will be seen daily at stated hours—viz., 12, 2.30, 4, and 6 o'clock during the whole time the exhibition remains open. This is the first occasion on which manipulations with live bees, extracting honey from combs, bottling it for sale, glassing and casing sections for market, has been done in the presence of visitors inside an ordinary building. We are also pleased to add that the whole of the demonstrations referred to will be undertaken by Mr. W. Herrod, the leading expert of the B.B.K.A., aided by skilled assistants. It will form an object-lesson in the art of bee-keeping unique in its way and useful in the highest degree for bee-keepers, while most interesting to the general public.

We give the above particulars feeling sure that the interest already aroused will be extended thereby, and that all who can will avail themselves of the opportunity offered of making themselves acquainted with the wonders of bee-life and the advanced bee-keepers' methods of dealing with the busy little labourers under his charge.

SHROPSHIRE B.K.A.

The annual show of the above was held on August 17 and 18 in the Quarry, Shrewsbury, in connection with the Shropshire Horticultural Society's "Great Floral Fête."

The entries were similar to last year, and the exhibits were very good, considering the adverse season. The B.B.K.A. Silver and Bronze Medals were won by Mr. S. Cartwright, and the certificate by Mr. A. G. Preen.

The arrangements of the show were carried out by Miss Eyton, hon. treasurer, Mr. Cartwright, hon. secretary, and a committee, of which Mr. Roff King was chairman.

Messrs. F. H. Taylor (Chorley), R. Cock (Stafford), and A. Watkins (Hereford) were the judges, and made the following awards:—

OPEN CLASSES.

Twenty-four 1-*lb. Sections.*—1st, S. Cartwright, Shawbury, Shrewsbury.

Twelve 1-*lb. Sections.*—1st, Miss H. Ratcliffe, Barthomlea, Crewe; 2nd, W. Patchett, Cabourne, Lincs.

Twelve 1-*lb. Sections* (*other than* 4¼ *in. by* 4¼ *in.*).—1st, S. Cartwright; 2nd, A. Hamer, Llandilo.

Twenty-four 1-*lb. Jars Extracted Honey.*—1st, T. S. Holdsworth, Kirton, Lincs; 2nd, S. Cartwright; h.c., A. Hamer.

Twelve 1-*lb. Jars Extracted Honey.*—1st, T. S. Holdsworth; 2nd, J. Boyes, Cardiff; 3rd, A. Hamer; h.c., A. G. Preen and W. Patchett.

Twelve 1-*lb. Jars Extracted Honey* (*Medium Colour*).—1st, T. Simpson Jones, Welshpool; 2nd, J. Helme, Weobley, Hereford; 3rd, A. Hamer.

Single 1-*lb. Jar Extracted Honey.*—1st, A. Hamer; 2nd, T. S. Holdsworth; 3rd, W. Patchett; h.c., S. Cartwright.

Single 1-*lb. Section.*—1st A. G. Preen; 2nd, S. Cartwright.

MEMBERS ONLY.

Twenty-four 1-*lb. Sections.*—1st, S. Cartwright; 2nd, P. Jones, Church Stretton.

Twelve 1-*lb. Sections.*—1st, P. Jones; 2nd, T. E. Hartshorne, Broseley.

Twenty-four 1-*lb. Jars Extracted Honey.*—1st, S. Cartwright; 2nd, R. Holland, Wellington; 3rd, J. Carver; v.h.c., J. W. Astbury, Hadley, Salop; c., F. W. Norris, Cardington, Salop.

Twelve 1-*lb. Jars Extracted Honey.*—1st, A. G. Preen; 2nd, P. Graham, Montford; h.c., P. Jones.

Twenty-four 1-*lb. Jars Dark Extracted Honey.*—1st, Mrs. Powell, Cold Hatton; 2nd, A. G. Preen; h.c., R. Blakemore.

ARTISAN MEMBERS ONLY.

Twelve 1-*lb. Sections.*—1st, G. Croxton, Yorton; 2nd, L. Powell, Cold Hatton.

Twelve 1-*lb. Jars Extracted Honey.*—1st, J. Churton, Wollerton; 2nd, G. Croxton; h.c., D. Phillips.

Six 1-*lb. Jars Extracted Honey.*—1st, J. Churton; 2nd, E. Brookfield; h.c., L. Powell.

COTTAGER MEMBERS.

Six 1-*lb. Sections.*—1st, J. Jones, Church Stretton; 2nd, T. Croxton; h.c., Mrs. W. Powell.

Twelve 1-*lb. Jars Extracted Honey.*—1st, Mrs. W. Powell; 2nd, T. Diggory, Baschurch; h.c., J. Bright.

Six 1-*lb. Jars Extracted Honey.*—1st, J. Bright; 2nd, J. S. Simpson, Basford; h.c., Mrs. Powell.

Single 1-*lb. Section.*—1st, Jasper Jones; 2nd, T. Croxton.

Single 1-*lb. Jar Extracted Honey.*—1st, J. Bright; 2nd, Jasper Jones.

Three 1-*lb. Sections and Three* 1-*lb. Jars.*—1st, J. Bright; 2nd, Jasper Jones.

OPEN CLASSES.

Honey Trophy.—1st, W. H. Brown, Withington; 2nd, A. Hamer; 3rd, J. Bradley, Yockleton.

Complete Frame-hive.—1st, E. H. Taylor, Welwyn; 2nd, W. P. Meadows, Syston.

Collection of Bee-Appliances.—1st, W. P. Meadows; 2nd, E. H. Taylor.

Beeswax (*not under* 2 *lb., open*).—1st, W. Powell; 2nd, A. G. Preen.

Beeswax (*not under* 1 *lb., Salop only*).—1st, A. G. Preen; 2nd, T. E. Hartshorne.

CHESHIRE AGRICULTURAL SOCIETY.

HONEY SHOW AT SANDBACH.

The annual show of the above society was held at Sandbach on August 24. The honey department was, as usual, under the management of the County Bee-keepers' Association. Though the entries (67) were not as numerous as might have been desired, the show of honey was very fair for a bad season. The bee lecture (given in the C.B.K.A. Tent by Rev. T. J. Evans) was well attended, and much interest was taken in the demonstration by large numbers of people. The Agricultural Society has decided to hold its shows at Chester during the next five years. The Cathedral City being an excellent centre, it is hoped that bee-keepers will give their hearty support to the honey department, and make it even more successful in future years than it has been in the past.

The Rev. T. J. Evans, Tarvin Vicarage, Cheshire, and Mr. Robert Cock, Stafford, officiated as judges, and made the following awards:—

OPEN CLASSES.

Complete Frame-hive.—1st, George Rose, Liverpool; 2nd, W. Cartwright, Moore, Warrington.

Twelve 1-*lb. Sections.*—1st, W. Patchett, Cabourne, Lincs; 2nd, W. Ratcliffe, Barthomley, Crewe; 3rd, W. Woodley, Beedon, Newbury; reserve, C. E. Mitchell, Onneley; v.h.c., F. Bate, Knutsford.

Twelve 1-*lb. Jars Extracted Honey.*—1st, J. Pimlott, Ashley, Altrincham; 2nd, W. Patchett; 3rd, W. J. Cook, Binbrook, Market Rasen; reserve, T. S. Holdsworth, Kirton Lindsey; v.h.c., W. Woodley.

MEMBERS' CLASSES.

Beeswax.—1st, W. Ratcliffe; 2nd, W. Cartwright; 3rd, J. Astbury, Kelsall; reserve, F. H. Turner, Mouldsworth; v.h.c., W. Chadwick, Congleton.

Six 1-*lb. Sections.*—1st, W. Ratcliffe; 2nd, J. Moir, Brereton; 3rd, J. Astbury; reserve, R. Gray, Bromborough.

Six 1-*lb. Jars Extracted Honey.*—1st, W. Johnson, Bridge Trafford; 2nd, T. Ramsell, Sandbach; 3rd, J. Astbury; reserve, F. H. Turner; v.h.c., A. Thorpe, Wistaston.

Two Shallow-frames Comb Honey.—1st, H. Eaton, Sandbach; 2nd, R. Gray; 3rd, T. Ramsell.

DISTRICT CLASSES.

Six 1-*lb. Jars Extracted Honey.*—1st, T. Ramsell; 2nd, A. Thorpe; 3rd, W. Ratcliffe; reserve, H. Eaton.

Three 1-*lb. Sections.*—1st, W. Ratcliffe; 2nd, J. Moir; 3rd, J. E. Twemlow.—E. CHARLEY, Hon. Sec., C.B.K.A.

HONEY SHOW AT BRADFORD ABBAS.

The eleventh annual show of honey, held under the auspices of the Yetminster District B.K.A., was held on August 24, in St. Mary Mead (kindly lent by Rev. Gordon Wickham). The entries were not quite so numerous as in previous years, except in the open classes.

Mr. Stacey (Merriott) and Mr. Tilley (Dorchester) judged the exhibits, and made the following awards:—

MEMBERS' CLASSES.

Standard Frame of Comb Honey.—1st, F. Trott, Leigh.

Shallow-frame of Comb Honey.—1st, G. Leeding, Bradford Abbas; 2nd, F. Trott; 3rd, T. Bishop, Bradford Abbas.

Six 1-*lb. Sections.*—1st, G. Leeding; 2nd, W. Pomeroy, Bradford Abbas; 3rd, Rev. G. Wickham, Bradford Abbas.

Bell Glass (*over* 10 *lb.*).—1st, G. Leeding; 2nd, T. Bishop.

Bell Glass (*under* 10 *lb.*).—1st, G. Leeding; 2nd, T. Bishop.

Six 1-*lb. Jars Extracted Honey* (*Dark*).—1st, T. Bishop; 2nd, W. Pomeroy; 3rd, G. Leeding.

Six 1-*lb. Jars Extracted Honey* (*Light*).—1st, F. Trott; 2nd, Rev. G. Wickham; 3rd, W. Pomeroy.

Beeswax.—1st, G. Leeding; 2nd, W. Pomeroy; 3rd, F. Trott.

Honey Trophy.—1st, G. Leeding; 2nd, T. Bishop.

Bee-Driving Competition.—1st, C. Smith; 2nd, W. Long.

OPEN CLASSES.

Three 1-*lb. Jars Extracted Honey.*—1st, T. Bishop; 2nd, E. C. R. White, Newton Toney, Salisbury.

Three 1-*lb. Sections.*—1st, E. C. R. White; 2nd, Hon. Mrs. Haverfield, Marsh Court, Sherborne.

Collection of Bee-Flowers.—1st, Miss Hilda Leeding, Bradford Abbas.

During the afternoon Mr. M. H. Tilley gave lectures and demonstrations in the bee-tent.—G. LEEDING, Hon. Sec.

SHOW AT BISHOP'S STORTFORD.

At the above show, held at Bishop's Stortford on August 10, the honey classes, arranged by the Bishop's Stortford and District B.K.A., of which the Rev. H. Newman, of Brent Pelham, is now the secretary, were a capital addition to the show, and brought some very good honey to the public view. An observatory hive, lent by Messrs. James Lee and Son (London), was exhibited by the secretary. The following prizes were awarded for honey:—

Twelve 1-lb. Sections.—1st, W. Loveday; 2nd, C. Lodge; 3rd, T. Bunting.

Six 1-lb. Sections.—1st, W. Loveday; 2nd, T. Bunting; 3rd, C. Lodge.

Three Shallow-frames Comb Honey.—1st, W. Loveday; 2nd, C. Lodge; 3rd, W. Stacey.

Super of Honey.—1st, W. J. Kitson; 2nd, R. Blake; 3rd, J. Smith.

Glass Super of Honey.—1st, E. Turner; 2nd, W. J. Kitson.

Single 1-lb. Jar (Light) Extracted Honey.—1st, W. Loveday; 2nd, T. Bunting; 3rd, C. Lodge.

Single 1-lb. Jar (Dark) Extracted Honey.—1st, T. Bunting; 3rd, W. J. Kitson.

Six 1-lb. Jars Extracted Honey.—1st, W. Loveday; 2nd, C. Lodge; 3rd W. J. Kitson.

Beeswax.—1st, C. Lodge; 2nd, W. Loveday; 3rd, W. J. Kitson.

Honey Trophy.—1st, C. Lodge; 2nd, W. J. Kitson; 3rd, T. Bunting.

MEMBERS ONLY.

Comb Honey.—1st, Rev. H. Newman; 2nd, Mrs. J. Foster; 3rd, C. J. Dodd.

Extracted Honey.—1st, C. J. Dodd; 2nd, F. Bass; 3rd, J. Heath.—(Rev.) H. Newman, Hon. Sec., Buntingford, Herts.

HONEY SHOW AT LLANGOLLEN.

The above show was held on August 25 in connection with the sixth annual flower, fruit, and vegetable show, and was very successful. The competition in the class for extracted honey was very keen. The Rev. T. J. Evans, of Tarvin Vicarage, acted as judge, and also gave two lectures and demonstrations on bee-keeping, which were greatly appreciated by the large crowd that thronged round the bee-tent. The awards were as follows:—

OPEN CLASSES.

Six 1-lb. Sections.—1st, George Jeffries, Andover; 2nd, James Clay, Wellington. Salop; 3rd, William Patchett, Cabourne, Lincs.

Six 1-lb. Jars Extracted Honey.—1st, William Patchett; 2nd and 3rd, R. Morgan, Cowbridge.

Beeswax.—1st, George Jeffries; 2nd, R. Morgan; 3rd, Alf. G. Preen, Nesscliffe.

LOCAL CLASSES.

Six 1-lb. Sections.—1st, Dr. Williams, Llangollen; 2nd, Mrs. T. Charles Davies, Llangollen; 3rd, G. W. Bailey, Llangollen.

Six 1-lb. Jars Extracted Honey.—1st, Mrs. T. Charles Davies; 2nd, A. Williams, Llangollen; 3rd, Dr. Williams.

COTTAGERS' CLASSES.

Two 1-lb. Sections.—1st, Elias Jones; 2nd, D. Edwards.

Two 1 lb. Jars Extracted Honey.—1st, Edward Roberts; 2nd, Thomas Jones; 3rd, D. Edwards.

Beeswax.—1st, D. Edwards; 2nd, Elias Jones.—Frank Little, Sec.

HONEY SHOW AT FLEETWOOD.

In connection with the Fleetwood Horticultural Society's sixteenth annual show, held at Fleetwood on August 24, a honey section was held under the auspices of the Lancashire B.K.A. The entries were very satisfactory, and the exhibits good in quality. The weather being fine the show was well attended. Mr. J. F. Williamson, of Fleetwood, acted as judge, and made the following awards:—

OPEN CLASSES.

Six 1-lb. Sections.—1st, Edwin Winter, Hessle Apiary, Boston, Lincs.

Six 1-lb. Jars (Light) Extracted Honey.—1st, F. Sharples, Rainhill, Liverpool; 2nd, W. J. Cook, Binbrook, near Market Rasen; 3rd, Rev. J. Banks, Thornton, Poulton-le-Fylde; h.c., J. Stirzaker, Stalmine, Poulton-le-Fylde.

Six 1-lb. Jars (Dark) Extracted Honey.—1st, J. Stirzaker; 2nd, Edwin Winter; 3rd, H. Neild, Bretherton, Preston.—*(Communicated.)*

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

FOSTERING BEE-KEEPING.

[5622.] I think we in this country have reason to complain that less is done for us in aiding and extending this pursuit than is done by those in authority in any other nation in the civilised world. In America the Department of Agriculture takes notice

of bee-keeping, and the governments of several States bestow not only their benediction, but assist with hard cash. In Canada they take cognisance of it as an industry deserving encouragement and fostering care. On the Continent, Government grants are given for its propagation, and it forms a recognised subject in schools and colleges in at least several of the countries where it is carried on most extensively. Taking Austria as a specimen, I find they have an academy in their capital for the advancement of the knowledge of bees, and the Emperor takes a personal interest in the scientific teaching and development of the subject, so that the pursuit is widespread and carried on on intelligent lines. The country is dotted over with bee clubs and apiarian societies, with an active central association. Apicultural instruction is paid for by the State, and the Government provides professors or experts who travel from place to place teaching the best and most modern methods. Great corporations encourage it directly and indirectly, not only allowing their employees to carry it on in their leisure hours, but even aiding them in starting it, and helping them to dispose of the produce.

In Ireland, for many years the Congested Districts Board has done excellent work in encouraging and fostering the industry in some of the poorest parts of Ireland, and their beneficial influence has been handed over to the Department of Agriculture and Technical Instruction for Ireland, who, I trust, will spread its knowledge and practice over the whole island with the very best results. Wisely, they are making horticulture and apiculture go hand in hand, and by their admirable system of experts' visits and instructors' teachings, spreading a knowledge of modern methods of the latest and best type. I look forward with the utmost confidence to a bright future being before the bee-industry in the sister island when the benign influence of the present teaching permeates the bee fraternity.

On this side of the Channel we are left out in the cold by Government, and, but for a few honourable exceptions in isolated County Councils, by any authorised public body. Private enterprise in the shape of the B.B.K.A. has made strenuous efforts to fill up the gap, but, handicapped sorely by lack of funds, performs only a moiety of what their aims and aspirations would make them desire to attain to. Local associations, too, are doing good work in many counties, but there are far too many blanks.

We in Scotland fare worse, at least as far as any union or combined effort is concerned. We have many bee-keepers all over the country, but all are like so many isolated units without any bond or combination. A few (a very few) local associations hold an annual show or an exhibition of honey in connection with the district flower show, where a few enthusiasts assemble yearly, but there the matter begins and ends. This is a sorry state of matters requiring to be remedied.

Bee-keeping was not always thus treated in Scotland, for in the past N.B. led the way, and for long was in the van wherever bee-men congregated. Proprietors, clergymen, merchants, and country gentlemen assisted it liberally, and agricultural and other show committees gave it their countenance and support. One of these associations, in particular, endeavoured to foster and extend this best-paying of our minor industries, viz., The Highland and Agricultural Society. I have lately recorded that they gave Bonnar's "Book on Bees" their patronage, and aided its publication by giving the author a premium. Under the head of "Cottages and Gardens" one of the points they kept in view was "Promoting attention to the cultivation and management of bees." In the history of the Society, by Dr. Ramsay, Banff, I find the following:—"We may in this connection mention encouragement given by the Society to bee husbandry. In 1828 a premium of five sovereigns was voted to Alexander Young, Garmouth (Speymouth), for a bee-hive of improved construction, which was adapted both for observation and to promote the collection of honey.

"In the same year premiums were offered to cottagers for raising the greatest number of hives of bees, and the following awards have since been made. Here follow a list of premiums varying in value from £2 to £5, from which I select two:—1st, 'Banff, £5 to Peter Stewart, Priestwell,' 2nd, 'Berwick, £4 to Robert Lawrie, Yetholm,' for having produced the largest quantity of honey of persons in the above counties reported to the Society."

These extracts at least show that the bee-industry in the past was recognised as one deserving of notice and encouragement.

Over a large area of the North of Scotland Government recognition would do an immense amount of good, and prove as great a boon, at least, as it does in con- To-day it seems to be left out in the cold. gested districts in Ireland. Those having the interest of the crofters at heart should take it up, and advocate at least a trial of it seriously, and not in the tentative and spasmodic manner hitherto practised, when I am confident its many benefits and advantages would be fully appreciated by all as an aid to rent paying and a source of income which would secure many small comforts which might aid in making life more worth living. The Highland and Agricultural Society might also renew their premiums, and thereby foster this branch of

the petite culture, which, I again contend, is the best paying of our minor industries. —D. M. M., Banff.

THE CHAPMAN HONEY PLANT.

ECHINOPS SPHÆROCEPHALUS.

[5623.] Some years ago, through the kindness of a brother bee-keeper, I received some seed of the "Chapman Honey Plant" which has since thriven beyond my most sanguine expectations. At the time of writing I have a veritable thicket of magnificent plants in a corner of my garden, crowded with bees, and, if not contributing materially to the honey surplus, yet undoubtedly a source of enjoyment to the bees. The plants attain a height of from 9 to 10 ft., and the profusion of flowers which they bear may be seen from the enclosed photograph of a few of the plants. An excellent illustration of the flower appeared in vol. 27 of your BRITISH BEE JOURNAL (page 188). There are some minor points about the "Chapman honey plant" which are not generally known, and which add to its value. In the first instance, it furnishes an excellent vegetable in the early spring, and one that can be easily grown on almost any soil. The young shoots should be well blanched like sea-kale and cooked in a similar way. The flavour reminds one of sea-kale with a slight resemblance to asparagus. A succession of shoots may be obtained through the summer by cutting down the main stems near the ground. The blanching should be complete, the least trace of green colour carrying with it a bitter taste. The stems of the mature plant are long and strong, and are very useful in the garden as supports for flowers, tomatoes, etc. The seeds germinate readily, and do not appear to be eaten by birds. Even the field mice will not touch them until germination has begun. The reason appears to be that the seed is encased in a sheaf of barbed fibres which penetrate and even traverse the tongue, producing painful sores.

THE CHAPMAN HONEY PLANT
(*Echinops Sphærocephalus.*)

The flowers not only attract bees, but also many night moths and earwigs do not seem able to resist their seductive aroma. By tapping the heads of the flowers at night over a plate or tray containing a little petroleum the bee-keeper who is also a florist may diminish the number of earwigs in his garden materially. For myself, I let the earwigs live, for they are great consumers of green blight, and although they do, undoubtedly, sometimes injure flowers, yet, on the whole, I think

they deserve to retain their little place in Nature's scheme.—WALTER T. REID, Addlestone, Surrey, August 15.

SOME BEE NOTES FROM KENT.

[5624.] For some time past I have been trying to find out if there is any visible difference between worker-bees reared for honey-gathering in the summer and those reared to stand the winter. It appears to me that the winter worker is a more perfectly developed insect than the summer one, it being to my mind larger, more robust, and more hairy. "Nemo," in his "Review of Foreign Journals" (page 249), says that only the bees reared late in the season survive till spring. But one of my stocks having killed off their drones early also reared a batch of these autumn-bred bees I refer to. It appears that they are reared after the majority of the drones are killed off and honey-gathering is over; although if there is honey about bees will have it, by robbing, though they lose their life in the attempt.

I notice that drones are allowed to pass freely from hive to hive without being cast out as intruders, except when their own drones are on remand.

Pollen-clogged frames need not be broken up, if by putting them above the frames of another hive we could induce the bees to store honey or syrup on top of the pollen; then have them given back in the spring. The honey will preserve the pollen, and thus save the bees from carrying it out in the spring.

When examining a hive on a very hot day this summer the queen ran out at the entrance. I never heard of a queen decamping like this before without having any reason for flying off, for there was nothing done beyond the usual inspection of frames.

I tried using water-paint mixed with a little pink carbolic powder and parmanganate of potass for the inside of three hives this year, and I have not so much as seen one moth in them. Moths are also fond of hiding underneath the floorboard and deposit their eggs in any seams or crevices they find. I therefore painted such places, using a little soot along with the paint mentioned, and after that no trouble from moths arose.—H. P., N. Brompton, Kent.

BEES AND CANTERBURY BELLS.

[5625.] Last spring I had a number of Canterbury bells in bloom in my garden, and at the time I noticed how my bees worked on the blossoms. They are again doing the same now, when the plants are just beginning to bear a second crop of bloom. The plants literally "hum" with bees all day long. If any of your readers would like to have some seed of this hardy plant I shall be pleased to send them some on receipt of an addressed stamped envelope. The seed should be sown in the spring, and the plants will blossom early the following year. Then, if all the seed-pods are cut off after the spring bloom is over the plants flower again in the autumn. Perhaps some B.B.J. reader could send me a few seeds of the "Globe-Headed Thistle" in exchange for Canterbury bell seed? If so, I should be greatly obliged.—J. HOLDOM, 3A, Mersham Road, Thornton Heath, Surrey.

Queries and Replies.

[3536.] *Licences for Hawking or Peddling Honey.*—Hawking or peddling is, I believe, not altogether unconnected with honey, hence my appeal to you to know which of the two licences it is necessary to procure to offer honey for sale in the streets. The former costs £2 and the latter 5s. Though both terms seem to mean the same thing, yet the former is classified under excise and the latter under the police. If I have to purchase the former, the cost would preclude me from so offering honey. If the latter, there would be some chance of selling it, and I should be glad if you could enlighten me. I send name, etc., and sign —PEDLAR, Leighton Buzzard.

REPLY.—The terms "pedlar" and hawker are synonymous, according to the best dictionaries. Why the value of the respective licences are so very different in cost as stated we cannot say; but a pedlar's licence would seem to cover the selling of honey from door to door. It might be different if honey is set up for sale on a stand in a market place or in a public thoroughfare; that would probably need a hawker's licence.

[3537.] *Uniting Weak Swarms.*—In the early part of June a swarm issued from a straw skep. Two days afterwards an after-swarm came off, and a week later another after-swarm issued—all out of the one skep, and each issue was separately hived in a skep. On or about August 1 I inspected them and found the swarms and after-swarms and also parent hive were very sparsely occupied with bees. The swarms had worked out a small amount of comb, occupying space perhaps a tenth of the skep's capacity, but filled with brood. It seems hopeless to winter them in that state. I suggested uniting them in the parent skep in the autumn and feeding. Would you kindly say what you would do

in the circumstances?—A. M., Leighton Buzzard, August 23.

REPLY.—The best course would be to unite the three lots as proposed, taking care to preserve the best queen to head the colony.

[3538.] *Wholesale Feeding for Storing Combs.*—Will you kindly advise me in your valuable journal if the plan suggested in the "Guide Book" (page 114) can be used exclusively for winter-feeding? The plan I refer to is that suggesting to feed one hive in September with syrup in large quantities and use the syrup-filled combs for all stocks in place of their honey-filled combs. I have five stocks in frame-hives, and, if you recommend it, propose to adopt the above method. Thanking you for past advice.—A. S. M., Blackheath, S.E.

REPLY.—The plan mentioned in "Guide Book" was not intended to be used in the sense stated, *i.e.*, to enable the bee-keeper to remove all combs containing honey and replace them with syrup-food, stored wholesale in frames of comb filled by one colony. The work intended to be done by a single colony was limited to storing syrup, enough to eke out stores in stocks where a shortage is feared. One colony could not possibly do all the work you propose for it, nor would it be found, profitable in the end to remove all honey from hives and replace it with sugar-syrup.

[3539.] *Moving Bees in September.*—Will you please tell me if it is possible to remove my two hives with bees and brood to another house about 50 yards away without loss of bee-life? I thought if I move the hives at night and close up entrances for a day or two this might be practicable. Am I right? 2. It is impossible to move them after September. I send name and sign—STREATHAM, S.W., August 21.

REPLY.—1. Moving stocks of bees 100 yds. in September would be certain to involve loss of bee-life. The bees, however, would be minimised or considerably lessened by using some means of altering the appearance of the hive fronts for a few days after moving. A small branch of a tree laid on flight-board will suffice if bees have to exercise some trouble in passing out and in. In two or three days the branch may be removed. 2. Bees may be moved in winter any distance, long or short, after they have been kept indoors for some weeks by cold weather. Or if moved a mile or two away after September there will be no loss.

[3540.] *Large Frames in Hives—Getting Unfinished Combs Completed.*—I have a hive of American make, with ten large frames, far beyond standard size. The colony in this hive has never done well. A hybrid queen was introduced about four years ago, and they have only swarmed once that I know of. Thinking something must be wrong, a friend helped me to examine them a fortnight ago, and we took out five or six frames, with the exception of the outside one, which was empty one side. They were all perfectly clean and nearly full of honey, but not much brood. I could not extract, as frames are much too large for extractor. I suppose hive is too large to work satisfactorily in this country. 1. Will you kindly advise me as to future management? 2. On another hive I have shallow-frames partly full of honey, but not sealed. I am now feeding with thin honey and water, about a pint every night, in order to get these combs sealed. Have I done right, and could same be done with sections? 3. This year a good deal of pollen has been stored in shallow-frames. What does it mean, and must it be cut out at end of season? Thanking you in anticipation, I send name for reference and sign —AMATEUR, Suffolk.

REPLY.—1. Though we strongly object to very large frames, there are bee-keepers ready to urge the use of larger frames than the "standard," which we consider large enough for this country. Your experience is in accord with this view, and we can only advise your keeping the hive for comparing the general results alongside those with standard frames. 2. We do not recommend giving bees honey in order to get sections and shallow-frames completed. It does not pay, and honey and water will not fill combs with "ripe" honey. 3. It means that pollen was more abundant than honey at the gathering time. If combs are "pollen clogged" they are useless, and such combs should be got rid of as unfit for either brood or honey storing.

[3541.] *Suspected Foul Brood.*—You may remember that at the end of May, and again in mid-June, I sent samples of comb from two hives in my apiary containing cells suspiciously like foul brood, and yet unlike in some respects. Both times you were able to report that it was *not* foul brood, but advised me to send again if the symptoms continued. The stocks from which enclosed samples are taken I requeened, thinking the dead brood might be caused by a defective or failing queen, and for some weeks after the young queen began to lay the brood was perfect. But on again looking through the hive recently, these same suspicious cells appeared on several frames, and from its reappearance I cannot help fearing it is foul brood after all. The stock is now very fairly strong on nine frames. In the other hive the complaint, instead of increasing, as would be probable in foul brood, has almost disappeared, only three cells on one frame showing anything wrong, but these have just the same character as enclosed sample. The stock is strong, covering ten frames. If again

you are able to tell me there is no disease, I should be so gratified if you could suggest treatment, as I am at a loss to know what is causing the brood to die in two strong stocks. Since writing to you before I have treated the hives as under suspicion. If it is foul brood, I shall, of course, at once get the bees of both hives on to fresh combs in fresh hives. Apologising for troubling you again, I send name and sign—St. Leonards, Devon, August 24.

Reply.—We cannot trace actual foul brood in any of the few cells in the small bits of comb sent, though there is a suspicious look about the contents of one cell. Our advice is to continue the use of preventives and leave the bees where they are for the winter. A few young bees have hatched out all right since comb reached us, and it would be a pity to sacrifice such young bees in order to save older ones. In any case, it seems obvious that the remedies used are holding the disease (if any) in check.

REVIEWS OF FOREIGN JOURNALS.

By "Nemo."

In *Bulletin de la Société d'Apiculture d'Alsace-Lorraine*, C. Zwilling says that a bee-keeper in Bavaria found two wasps' nests which he thought were infected with foul brood. The idea occurred to him to send them to Berlin to have them examined by the Bacteriological Bureau. From the answer received, it was evident that no trace of *Bacillus alvei* characteristic of foul brood was found.

The *Deutsche Bienenfreund* says that one of the best materials for the smoker is to be found in the mouldy branchlets of oak trees found on the ground in forests. These should be collected, not for firewood, as they are no use for this purpose, but crumbled up and used in the smoker. They light easily and smoulder without going out, and emit a dense and pungent smoke, which rapidly subdues the bees.

In the *Rheinische Bienenzeitung* M. Dickel describes a curious experiment. He cut a hole in one of the combs of a hive and inserted a piece of comb with the eggs it contained, taken from a wasps' nest. The experiment was repeated thrice and every time it produced a curious commotion amongst the bees. In approaching it the bees stopped dead, as if fascinated by the strange substance. Their antennæ were extended forward with feverish movements. They then dashed upwards and spun round madly. This was soon followed by others who joined in the unrestrained dance. By degrees some of them got over their fear of this strange object and approached it with their trembling antennæ extended and flapping their wings, and still continuing their comical dance. At length they decided to risk an attack, and tore the nest into shreds, evidently with repugnance. They were more undecided about touching the eggs, but these they also attacked at last, crushing them with their mandibles. They seemed thoroughly disgusted, and showed it by getting rid of the egg shell as quickly as possible with their front legs.

We read in *Le Rucher Belge* that the special train which was mentioned on page 302 of B.B.J. for August 4, consisting of sixteen waggons, started from Fliron on July 21. Owing to the special arrangements and also to a fresh breeze blowing all the morning, the colonies arrived at their destination in excellent condition. Four waggons were attached to the train at Pepinster, where it stopped for the purpose.

In *Le Rucher Belge*, C. P. Dadant says that formalin, about which so much has been said during recent years, has proved a failure in numerous cases of foul brood, and the destruction of combs and brood is absolutely necessary. It has also been proved, he says, that wax melted in boiling water cannot be a source of contamination. He believes that the property of melted wax, of penetrating tissues and hardening them on cooling, is the reason for this immunity. The spores of foul brood, after melting the wax, are so covered and penetrated by it that they are no longer to be feared, even if they had retained the power of development.

From the *Journal of the Royal Microscopical Society* we gather that H. v. Thering (Zool. Jahrb. xix., 1904) communicates many interesting facts concerning the habits and structure of the stingless honey-bees of Brazil. A comparison of representatives of the genera *Melipona* and *Trigona* with *Apis mellifica* shows, in addition to the characters common to all Apidæ, such as the existence of drones, queens, and workers, swarming, collection of honey and pollen, and the use of wax for building, two important structural differences, viz., the rudimentary nature of the sting, and the formation of the wax-plates on the *dorsal* side of the abdomen. These differences have led the author to constitute the genera in question a separate family from the Apidæ. These bees build their nests invariably in the stems or branches of trees; they choose trees that rot easiest; but some build in the earth, as deep as four metres, with a perpendicular, slanting, or spirally twisted tube to the surface.

Bee Shows to Come.

September 3 to 10, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders' (12th) Annual Exhibition and Market. Numerous classes and liberal prizes for comb and extracted honey and beeswax. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad-street, London, E.C.

September 17 to 24, at the Agricultural Hall, London.—Honey Show in connection with the twelfth Annual Exhibition and Market of the Grocery and Kindred Trades. Numerous classes and liberal prizes for comb and extracted honey and beeswax. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad-street, London, E.C.

Special Notice.—In connection with above Shows there will be a *Working Exhibit* illustrative of modern Bee-keeping and Honey-production, including *Demonstrations* with *Live Bees* and extracting honey from combs for sale by skilled experts. (See large advt. p. v.)

September 13, at Woodstock.—Honey Show of the Oxfordshire Bee-keepers' Association in conjunction with the Woodstock Agricultural and Horticultural Association. Open classes for single 1-lb. section, and single 1-lb. jar extracted honey. Prizes 7s. 6d., 5s., and 2s. 6d. (entry free). Schedules from H. M. Turner, Hon. Sec., The Turl, Oxford. **Entries close September 10.**

September 14 and 15, in Waverley Market, Edinburgh.—Eleventh Exhibition of the Midlothian B.K.A. in connection with that of the Caledonian Horticultural Society. Twenty-four classes, with good prizes, for honey and beeswax, including seven open classes (three prizes in each). Schedules from W. Reid, Secretary, Heriot, Midlothian. **Entries close September 7.**

September 14 and 15, at Derby.—Derbyshire B.K.A. Twenty-third Annual Show of Hives, Bees, and Honey on the show ground of the Derbyshire Agricultural Society. Five open classes for honey, and collection of bee-appliances. Schedules from R. H. Coltman, Hon. Sec. D.B.K.A., Burton-on-Trent. **Entries close September 3.**

September 15, 16, and 17, at Crystal Palace.—Surrey Bee-keepers' Association Annual Exhibition of Bees, Honey, Wax and Appliances, &c. Twenty-five classes (ten open to all). Increased prizes and medals, Schedules from F. B. White, Secretary, Marden House, Redhill, Surrey. **Entries close September 1.**

October 4 to 7, at the Agricultural Hall, London.—Show of Honey and Bee-produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, &c., including the valuable Silver Challenge Cup of the B.B.K.A. Schedules from Mr. Wm. C. Young, Secretary, 12, Hanover-square, London, W. **Entries close September 5.**

Notices to Correspondents & Inquirers.

DUFFIELD (Derby). — Judging by dead brood in comb sent, the larvæ, which have all reached the pupa stage, has the appearance of having been asphyxiated by overdosing with crude naphthaline such as is used by plumbers. There is no foul brood visible, nor can we account for death of brood in any other way.

J. A. B. (Bridge of Allan).—*Tits and Bees.*—The "remains" disgorged by the tit (or flycatcher) show portions of other insects besides bees, but the head you mention as being too small for that of a bee is really a bee's head.

C. H. BOCOCK (Newmarket).—*Insect Nomenclature.*—The insect sent belongs to the Longicorn family of beetles. Species. (*Saperda populnea.*) It is very common near London, usually frequenting places where the alder tree is found growing.

NORTH LINCOLN (Hull).—*Keeping Italian Bees Pure.*—We fear there would be a very small chance of your Italian queens mating with drones of your own selection, while there are "bees kept a little more than one mile away." The probability is that the Italians would mate away from home if there are hives of native bees kept two or more miles off.

A. H. (Derbyshire).—*Soda Borax as a Preventive.*—This was used along with salicylic acid in solution as a preventive against foul brood twelve or fifteen years ago; but since more effective remedies have been discovered those mentioned have fallen into disuse. The "soda borax" is merely borax in lump-form, and its main purpose is to keep the acid in solution.

W. T. D. (Altrincham).—*Bee-papers and County Associations.* — Members of County B.K.A.'s can obtain either the B.B.J. or the *B.K. Record* by post at wholesale rates if ordered through their respective associations, but membership does not entitle any one to order direct from the office at a lower rate of subscription than outsiders.

(REV.) J. M. (Suffolk.)—*The Cowan Hive.*—Any hive-maker will supply the hive mentioned.

Suspected Combs.

J. ISMAY (Cumberland).—Comb contains chilled brood only.

ANXIOUS (Birmingham).—Sample is badly affected with foul brood in virulent form.

D. J. H. (Witney).—There is foul brood in three cells of sample sent; not quite a recent outbreak, but disease of some standing, though apparently held in check by some means.

NOVICE (Sheffield).—The small bit of old black comb sent only contains two cells on one side with anything therein to judge from, and we cannot form a reliable opinion from such poor material. There is no disease visible.

Honey Samples.

W. D. (Notts).—The light-coloured sample is good in colour and consistency, but it appears to have acquired an artificial aroma (like the scent of violets) from the bottle in which it came to hand, otherwise we cannot tell what the aroma comes from. The flavour is also peculiar, and we are at a loss to tell the source whence it is derived. Darker sample is very thin, as if extracted from unsealed combs. The flavour is also inferior. We should not mix the two samples, as the

better honey would be deteriorated thereby.

P. WATSON (Romford).—Both samples consist largely of honeydew. It has been a curious feature of this season with the yield from lime trees in some districts. The blossoms have been affected in some way so as to stop the secretion of honey, while the leaves of the trees are covered with the aphis blight.

A. E. J. R. (Llanidloes).—Sample is fairly good in flavour, but of medium colour, and not very bright. It would make a good honey for marketing when granulated, but as a liquid honey for table use would only realise a low price wholesale.

*** *Several Letters and Queries are unavoidably held over till next week for lack of space.*

Special Prepaid Advertisements.

Twelve words and under; Sixpence; for every additional Three words or under, One Penny

Advertisements for current issue must be received by first post on Tuesday.

YEW TREE FARM, Wilsford, Pewsey, Wilts, one mile from Woodborough (G.W.R. Stn.).—G. T. SMITH is favoured by LOT, MILES, & SONS, who are leaving the farm, with instructions to SELL BY AUCTION, on MONDAY, SEPTEMBER 12, at 11.30 p.m., the CONTENTS of APIARY, consisting of 30 Stocks of Bees in frame-hives, with their Honey; "Cowan" Reversible Extractor and sundry Appliances; also 150 Head Pure Bred Poultry, consisting of Black Orpingtons, Black Langshans, Indian Game, White Wyandottes, Six "Pocock's" Patent Egg-boxes, together with Live and Dead Farming Stock. D 29

WANTED, 1 cwt. LIGHT EXTRACTED CLOVER HONEY, sample and lowest price. THREE SKEPS to drive on September 6. Who will have the lot of bees in box for 7s. 6d.? S. BAILEY, Itchingfield, Horsham. D 9

STRONG STOCKS OF BEES, in skeps, for sale, 12s. 6d. each. H. BROUGHTON, Barrow-on-Humber, Hull. D 12

LIGHT CLOVER HONEY FOR SALE, £2 16s. per cwt.; packed free. FARMER, The Nook, Fairford. D 14

RUN HONEY WANTED, new, light, straw coloured, 1,000 lb. or more. Send sample and lowest price per cwt. to GORDON ROWE, Honey Packer, Market Lavington, Wilts. D 13

HEALTHY DRIVEN BEES, 1904 Queens, packages free, 5s. per lot. BROWN, Withington, Shrewsbury. D 28

FOR SALE, EXTRACTED HONEY in 30-lb. tins and 1-lb. screw-cap Jars; prize honey. Sample 2d. Also few lots driven Bees. H. J. WISBEY, Whittlesford Mill, Cambs. D 20

WANTED, BROOD-FRAME with food for winter use, guaranteed free from disease. CROSS, Milford, Bakewell. D 19

1904 TESTED QUEENS, healthy and safe arrival guaranteed. 3s. 6d. each. CARBINES, Bee-Expert, Cardinham, Bodmin, Cornwall. D 11

YELLOW CROCUS, the best spring flower for bees, large bulbs, 1s. per 100, 8s. per 1,000, carriage paid; Spanish Iris Bulbs, same price, cheaper for quantity. EDW. ROBB, Outwell, Wisbech. D 16

GENUINE BARGAIN.—7 Frame-Hives (5 "W.B.C."). 5 rood-Boxes, 6 Shallow-Frame Crates, 4 "W.B.C." Section Crates (fitted), "Guinea" Extractor, Swarm Catcher, 7 Sheets Excluder Zinc, Smoker, Honey Knife, &c.; in excellent condition and guaranteed free from disease; the lot £5 or offers? P.K., 55, Browning Road, Enfield. D 8

YOUNG FERTILE QUEENS, in Introducing cage, with Instructions, 3s.; selected 1904, 5s, DAVIDSON, Beecroft, Basingstoke. D 15

Prepaid Advertisements (*continued*).

THROUGH Owner removing must sell following appliances: good Extractor, clean and bright as new, 18s.; six Section Racks, Sections, Dividers, complete, 1s. 6d. each, 4 of these have never been used; first-class Self-Hiver, 3s.; &c. Correspondence invited. EDW. ROBB, Outwell, Wisbech. D 17

ENGLISH, Irish, or Scotch Heather Honey. Wanted few hundredweights. Must be good, full flavour. Price and sample to A. S. DELL, The County Apiary, Leigh, Lancs. D 24

DRIVEN BEES. Strong lots, with Queen, 3s. 6d. per lot. Boxes returnable. MILLWARD, Chaddesley, Kidderminster. D 23

GENUINE BARGAIN.—OWNER REMOVING.—13 Frame-hives, all double for supering; 5 skeps, strong and well stored; 16 cases of shallow-frames with clean worked out combs; 400 new sections; 15 Section-racks; 12 new Straw skeps (cane-worked), one Honey-Ripener and one Extractor, both as good as new; 10 dozen section cases, single glass. £12 the lot. Worth double. W. ROGERS, Town Farm, Princes Risboro, Bucks. D 27

GUARANTEED PURE ENGLISH HONEY, £2 16s. per cwt.; sample 2d. ALBERT COE, Apiarist, Ridgewell, Halstead, Essex. D 25

EIGHT HEALTHY STOCKS of BEES, on 10 to 15 Frames; £11 or £1 10s. per Hive. EDRIDGE, 35, Rothschild Street, West Norwood. D 21

YOUNG QUEENS, 2s. DRIVEN BEES with Queen, 4s 6d. Packages free. ROLLINS, Stourbridge. D 18

DRIVEN BEES, for immediate delivery 3s. 6d. HOOPER, Expert, Moseley Bank, Grimley, Worcester. D 26

REPEAT ORDERS. Year after year proves the reputation of the "Reliable" Bee Farm for sending out good stuff. Read the following testimonial:—"Leeds, Aug. 17, 1904. Sections arrived all right, and I am very much pleased with them. The marketable way in which you dispatch them is a credit to you. Hoping you will kindly let me know if you have any more.—Fred. Peckett." Prices: Sections, Plain, at 8s. doz.; Cased, at 8s. 6d. Extracted, 56s. cwt. Address, S. P. SOAL, "Reliable" Bee Farm, Rochford, Essex. D 10

STRONG STOCKS in Skeps plenty stores 1904 Queen 12s. 6d. 13s. 6d. Ditto on Standard Frames, guaranteed healthy. Honey Strainer, 8s. Honey Press, 4s. Perfect condition. Exchange Honey. Driven Bees, 5s., 6s. per strong stock, with Queen. Fertile Queens, 2s. 6d. W. WOODS, Normandy, near Guildford.

WANTED, SECTIONS and LIGHT EXTRACTED HONEY, in bulk, also in Shallow Frames, delivered in London, any quantity taken. Price and particulars to HERROD & STEWART, "W.B.C." Apiary, Luton, Beds.

TO IRISH BEE-KEEPERS.—Wanted to purchase, pale well-filled New Sections. T. SMITH & Co., Hyde Park, London, W.

HEALTHY DRIVEN BEES, with Queen, 5s. Package free. JOHN PHILLIPS, Spetchley, Worcester.

GUARANTEED good EXTRACTED HONEY, in 14 lb. tins and upwards. Sample 3d. DAVID HANCOX, Deddington, Oxon. C 37

SECTION GLAZING.—LACE PAPER, in neat patterns; White, 1 in. wide, 100 7d., 300 1s. 6d., 500 2s. 4d., 1,000 4s. 6d.; Pink, Green, and Blue, 1 in. wide, 100 8d., 300 1s. 9d., 500 2s. 9d., 1,000 5s. LACE BANDS (lace both sides), 2⅜ in., 3 in., and 3⅛ in. wide; White, 100 1s. 3d., 200 2s. 4d., 300 3s. 3d., 500 4s. 6d.; Lace Bands in Pink and Green, 100 1s. 6d, 300 4s. 3d., 500 6s. All post free. W. WOODLEY, Beedon, Newbury.

DON'T BE STUNG! Use the "Burkitt" Bee Glove. Pronounced success. Very light in substance. Unsolicited testimonials from all parts. Price 2s. 6d. per pair. With self-adjusting Sleeves, 3s. 6d. per pair, Post-free from EDWARD REYNOLDS, Sole Maker, Andover, Hants. Special terms to agents.

CUTLERY from the Warehouse to the Home. Razors, 1s., 1s. 6d., 2s. each. Scissors, 5in., 6in., 7in. long, 1s. 6d., 1s. 9d., 2s. 6d. each. Ladies' Cutting-out Scissors, 2s. 6d. each. Nail Scissors, 1s. 4d. each. Pruning Knives, 2s., 2s. 6d. each. Pruning Scissors, 5in. long, 2s. 2d. each. Table Knives, Dessert Knives, 16s. and 14s. per doz. (Beef-carver, Knife, Fork, Steel, 6s. 6d.) white handles. Cash with order. GEO. CRESWICK, Snaithing Apiary, Ranmoor, Sheffield. C 43

Editorial, Notices, &c.

THE CONFECTIONERS AND ALLIED TRADES' EXHIBITION.

HONEY SHOW AT THE AGRICULTURAL HALL.

The twelfth annual International Exhibition and Market of the Confectioners and Allied Trades opened on September 3 at the Royal Agricultural Hall, London, and continues till end of this week.

The present exhibition shows a most encouraging advance in the bee and honey section, the Minor Hall, on the ground floor, being largely occupied with the exhibits. These include an attractive display of bee-appliances and various things useful to bee-keepers, by Messrs. Abbott Bros., Southall; James Lee and Son, London; E. H. Taylor, Welwyn; George Rose, Liverpool; and W. P. Meadows, Syston. The several collections mentioned occupied the full length of the hall, forming a most interesting side-show, where bee-keepers can see and select any and every thing required in the apiary. It was exceptional in not being a competitive display, but meant simply for advertising purposes, and we must say the whole was most creditable to the firms represented. A well-earned Diploma of merit was awarded to each exhibitor. The whole upper end of the hall was occupied by the working exhibit of modern bee-keeping and honey production, including practical demonstrations with live bees, extracting and "jarring off" honey, casing, glassing, and lacing sections for market. All of these operations were undertaken by Mr. W. Herrod, the well-known leading expert of the B.B.K.A., and his assistants, as mentioned last week, and, as may be supposed, aroused considerable interest among the numerous onlookers.

With regard to the honey competitions proper, viz., the several classes comprised in the schedule, the number of entries was very disappointing. Here we had a list of money prizes for competition far exceeding in amount that of any honey show in the country, yet the total entries were smaller than at many a local show, where not a tithe of the amount offered in prizes was competed for. As an instance, in the trophy class four exhibits were staged in the large hall, and the four exhibitors carried off between them £10, in prizes of £4, £3, £2, and £1 respectively. The exhibits were quite worthy of the prizes, but what about the competition? The same might be said of some of the other classes, notably those for heather honey, in which the prizes literally "went a-begging," for only two prizes were awarded out of eight offered.

Some exceedingly good honey was shown both in sections and jars, but the first prize shallow-frames of honey for extracting stood out beyond anything else for weight and completeness. Each of the three combs was about $2\frac{1}{4}$ in. thick, and together weighed over 19 lb. Another exceptionally good class was that for beeswax in large cakes; any one of the exhibits staged would have secured a first prize at most shows, so excellent were they.

Space prevents us saying more, except to again express regret that more exhibitors had not the enterprise to put in an appearance on the show-bench.

Mr. W. Broughton Carr, London, and Mr. T. I. Weston, Hook, Winchfield, officiated as judges, and made the following

AWARDS.

Display of Honey (comb and extracted) and Honey Products, shown in suitably attractive form for a tradesman's window (4 entries). — £4 and B.B.K.A. Silver Medal), W. Woodley, Beedon, Newbury; 2nd (£3), Geo. Rose, Great Charlotte Street, Liverpool; 3rd (£2), R. Brown, Somersham, Hunts; 4th (£1), Jas. Lee and Son, Martineau Road, London, N.

Twelve 1-lb. Sections (13 entries).—1st (£1 10s. and Bronze Medal), W. Woodley; 2nd (£1), Jas. Lee and Son; 3rd (10s.), A. W. Weatherhogg, Willoughton, Lincoln; 4th (5s.), J. Clay, Wellington, Salop; v.h.c., W. Loveday, Hatfield Heath, Harlow; h.c., R. Brown; c., A. Barber, Comberton, Cambs.

Twelve 1-lb. Heather Sections (4 entries).—1st (£1 5s.), A. M. McDonald, Glen Urquhart, N.B. (No other prize awarded.)

Three Shallow Frames Comb Honey for Extracting (7 entries).—1st (£1 5s.), E. C. R. White, Newton Toney, Salisbury; 2nd (£1), Jas. Lee and Son; 3rd (15s.), G. Hunt, Newark; 4th (10s.), R. Brown.

Twelve 1-lb. Jars Light-coloured Extracted Honey (18 entries).—1st (£1 10s. and B.B.K.A. Certificate), R. Brown; 2nd (£1), T. S. Holdsworth, Kirton Lindsey, Lincs.; 3rd (10s.), W. J. Norman, Harpley Mills, King's Lynn; 4th (5s.), J. D. Softley, Great Masingham, King's Lynn; v.h.c., W. Loveday; v.h.c., W. Patchett, Cabourne, Caistor, Lincs.; v.h.c., Jas. Lee and Son; h.c., E. E. Scholefield, Chudleigh, S. Devon.

Twelve 1-lb. Jars Medium-coloured Extracted Honey (14 entries).—1st (£1 5s.), Jas. Lee and Son; 2nd (£1), E. C. R. White; 3rd (15s.), G. W. Kirby, Knowle, Bristol; 4th (10s.), F. W. Frusher, Crowland, Lincs.

Twelve 1-lb. Jars Dark-coloured Extracted Honey (11 entries). — 1st (£1), E. C. R. White; 2nd (15s.), Jas. Lee and Son; 3rd (10s.), A. Barber; v.h.c., G. W. Kirby; h.c., W. W. Davy, Donington, Spalding.

Twelve 1-lb. Jars Heather Honey (4 entries).—1st (£1 5s.), Jas. Lee and Son. (No other prize awarded.)

Twelve 1-lb. Jars Granulated Honey (8 entries).—1st (£1 5s.), W. Woodley; 2nd (£1), T. S. Holdsworth; 3rd (15s.), R. Brown; 4th (10s.), Jas. Lee and Son.

Beeswax in Cakes, Quality of Wax, Form of Cakes and Package, suitable for retail counter trade (10 entries). — 1st (£1), E. C. R. White; 2nd (15s.), J. Pearman, Penny Long Lane, Derby; 3rd (10s.), G. A. Preen, Nesscliffe, Shrewsbury; 4th (5s.), H. Berry, Llanrwst, N. Wales; h.c., G. W. Kirby.

Beeswax, judged for quality of wax only (15 entries).—1st (£1), Mrs. F. Harris, High Ferry, Sibsey, Boston; 2nd (15s.), E. C. R. White; 3rd (equal) (10s.), H. Berry and W. Patchett; v.h.c., A. G. Preen, W. Loveday, and E. E. Scholefield; h.c., W. W. Davy and J. Clay.

CARTMEL AGRICULTURAL SOCIETY.

HONEY SHOW.

The annual show of the above society was held in Cartmel Park on August 30. Entries in the honey department was a success, as shown by the increased entries, numbering 54 in all. The exhibits were also good and the competition keen. The Lancashire B.K.A. gave their silver and bronze medals as special prizes in the open class. In the local classes, H. Knowles, Esq., St. Michael's Skerton, and Mr. Geo. Rose, Liverpool, also gave special prizes in local classes for honey. The lectures given in the L.B.K.A. tent by Mr. J. F. Williamson, Fleetwood, were well attended, and much interest was taken in the demonstrations. Mr. Williamson also officiated as judge, and made the following awards:—

OPEN CLASSES.

Special Prizes. — Lancashire B.K.A. Silver Medal, J. Jones, Wegber Quarry, Carnforth. Lancashire B.K.A. Bronze Medal, T. Walker, Hawkshead, Lancashire.

Six 1-lb. Sections.—1st, I. Mossop, St. Bees; 2nd, T. Walker, Hawkshead; 3rd, D. W. Barnes, Coniston; 4th, T. Walker; r., Mrs. W. Patchett, Cabourne, Caistor, Lincs.; h.c., J. Jones.

Six 1-lb Jars Extracted Honey.—1st, T. S. Holdsworth, Kirton Lindsey, Lincs.; 2nd, J. Jones, Wegber Quarry, Carnforth; 3rd, J. Stirzaker, Poulton-le-Fylde; 4th, W. J. Cook, Market Rasen; r., Mrs. W. Patchett; h.c., A. Fox, Bardsea, and J. G. Nicholson, Langwathby, Cumberland.

Bees Wax. — 1st, T. Walker; 2nd, J. Jones; r., Mrs. Patchett; h.c., W. Clark, Grange-over-Sands.

LOCAL CLASSES.

Six 1-lb. Sections.—1st, J. Long; 2nd and 3rd, F. Thompson; 4th, Miss S. M. Arkwright, Grange-over-Sands; r., W. Clark; h.c., W. Clark.

Six 1-lb. Jars Extracted Honey.—1st, F. Thompson; 2nd, Miss S. M. Arkwright; 3rd and 4th, W. Clark.

Six 1-lb. Sections (Special Prize). — J. Long, Grange-over-Sands.

Six 1-lb. Jars Extracted Honey (Special Prize. — Frank Thompson, Grange-over-Sands.—(*Communicated.*)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "*THE EDITORS of the 'British Bee Journal,' 10, *Buckingham-street, Strand, London, W.C." All business communications relating to advertisements, &c., must be addressed to "*THE MANAGER, 'British Bee Journal' *Office, 10, Buckingham-street, Strand, London, W.C."*

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[5626.] The Honey Show of the Confectioners' Exhibition will, or ought to be, the principal item in the programme of the British bee-keeper during this week. Here we have Mr. W. Herrod, assisted by others, demonstrating to our greatest consumer—the public of London—and in the biggest emporium of the world, the methods used by bee-keepers of to-day in producing honey in its purest form. This ought to show consumers the amount of care bestowed on the product in order to place it on the market in its purest and cleanest form. Many will see for the first time how we remove the honey from the comb without injuring the latter, with no admixture of pollen or crushed brood as in the old days of "straining the honey from the broken-up contents of the straw skep. I was very sorry to find that two tables large enough to take a dozen or more trophies had been set apart in the large hall, and only four exhibits staged thereon. Surely bee-keepers failed to realise the opportunity these large shows have given individual bee-keepers of establishing a market for their produce. The honey buyers of large firms attend these exhibitions hoping to secure a supply not only for their immediate requirements, but a continued supply for the season so

long as honey is in demand, and I myself may affirm that section-honey in the comb is in demand at all seasons of the year, when it can be had of good quality and preserved in liquid condition in the combs. That has been my experience for many years past. I have secured regular customers, and we send off consignments of such sections every week throughout the year. It may be asked: "How did I obtain these customers?" My reply is: When I took up modern bee-keeping I put in an appearance on the show-bench at South Kensington, and trade began to flow in; this was a quarter of a century ago, and I still supply the same firms, to-day. My "trophy" at the Confectioners' Show this week was sold two months ago (or, rather, was ordered in advance) to one of my oldest customers, whom I almost look on as friends after so many years of honourable dealing. To others who produce honey and have difficulty in finding a market I say, "Go and do likewise." London is a big place, and requires a large quantity of food of all kinds every day. I would, therefore, impress on our home-producers that if we are not on the alert we have our Colonial brethren close by ready to do business on a large scale even in our own line. I do hope our bee-keepers will pay a visit to the Exhibition and see not only the British section, but also the grand exhibit staged by the Canadian Government, among which is a large parcel of fine section-honey; and what is of greater interest to them is the fact that, I was told, an English firm had bought all the honey staged before the show was open! Here we see the value of enterprise on the one part and the breadth of London's requirements on the other.

Our friend, "D. M. M.," in his interesting comments on page 343 last week, leaves out an important factor in any industry—i.e., "Self-interest." So soon as I found (pardon the *ego*) that bee-keeping was a profitable industry I began to establish a demand for my produce. In this I was actuated by "self-interest." The mainspring of success is to secure a good market, and if a man's own self-interest will not move him, I have but little hope of that man making a success in life. To be successful in bee-keeping or any other industry means steady, persistent, hard work, linked with care in all he does. *Labor omnia vincit* is the motto for bee-keepers, and although there are not fortunes to be made out of our small industry, yet there is health to be found in tending to the apiary, a good living to be obtained from the labour of the bees, and a competency for those who are content with a moderate pension in their old age. —W. Woodley, Beedon, Newbury.

THE SEASON IN ESSEX.

[5628.] The fears entertained early in July that the "honey harvest" would be disappointing have been, unfortunately, more than fulfilled. The results, as far as can be gathered, have been little less than disastrous both as regards quality and quantity. The average per hive has been 8 lb. only, the colour of the honey ranging from "burnt sienna" to that of blacking! The best "take" in the town has, however, reached 54 lb., from three stocks, but all of the same bad colour. These bee-keepers (?) who were too clever—or too lazy—to feed in spring have obtained absolutely nothing. The results in my own case are 40 lb. from five stocks as against 125 lb. last year from the same hives. Most stocks will require a liberal allowance of syrup before closing down for winter, although some amount of honey is still being gathered from runner beans and mixed sources.

Wax-moth grubs of large size on the tops of frames are rather too frequently found, and in consequence require ceaseless vigilance in repressing. The broad knife (2½ in.) used by glaziers is most useful in cleaning tops of frames, and, after removal from hives, the excluders.

Super-Clearers.—I noticed in a recent issue of the B.B.J. that a super was found full of bees, although the "Porter escape" had been under all night. A similar difficulty occurred in one of my hives, and gave a lot of trouble in removal of super and "escape." On examining the latter it was found that a huge drone had become fixed in the springs, thereby blocking the "escape," and imprisoning all the bees that were in the super. Mishaps like these are very disconcerting to the novice, or when one is working single-handed. This particular example is another instance in favour of using the queen-excluder under all supers, as, of course, no drones could have been in the super had the excluder been in place. I send name, and sign—R. J. T., Romford, August 29.

BEE NOTES FROM WESTMORLAND.

[5628.] My apiary is situated on a S.E. slope between the verdant dales of Kent and Lune, and in the background lie the grey fells of South Westmorland.

Never having read a bee report from this district, I now send a few "notes." Our county, though credited with a heavy rainfall, yet has more than an average share of sunshine in summer. As regards bird and flower life, our district is truly a little paradise; bee-forage varied and plentiful. Unlike the South, we have no sainfoin, but white clover and trefoil fill our pastures, while the plane trees and

limes abound. Then there is the "ling" on every fell.

All, then, that our bee-keepers need is weather, and during the last two seasons this has been all against us. Hundreds of old box-hives—with plenty of "old box" about them—were left to perish, for farmers do not care to lay out cash for sugar. Foul brood, I know, is rampant in our neighbourhood, and has killed many a stock. More than once my hives have been attacked, but by sacrificing a few combs, and by adding naphthol to all food, I have so far warded off disaster that, in spite of two bad seasons, I began the present year with twenty stocks. The spring was backward, and it was mid-April before pollen was available, and breeding was retarded in consequence, yet by the middle of May I had seventeen strong stocks.

We had in May seventeen good bee-days, and with sycamores, whins, and dandelions in full bloom, many stocks had entered supers by the 24th.

The first week in June was also fine, and I saw drones flying for the first time; but the hawthorns gave a poor show of bloom, while the weather was generally adverse, though we had a few fine days at the close, during which odd patches of clover bloom put in an appearance. On June 21 my first swarm came off, but as I wanted honey the swarm was put where the present stock had stood, and the latter moved to a new position. I had two more swarms on July 7 and 18 respectively.

July was a typical bee-man's month. Farmers here allow their sheep to graze on the meadows till late in May, so that hay-time comes in July. It was so hot for the last week that the hay literally made itself; and bees did well on the abundant bloom of wild roses. Clover bloom was poorer, as also was trefoil, and oak trees were full of honey-dew; but I had to put a third super on each of seven hives. In this month we had a good deal of welcome rain. To-day, August 28, the heather on the fells spreads a great purple carpet. Here, there, and everywhere the busy bees are drinking in the nectar. I never saw a finer lot of heather bloom. It will last for a fortnight yet.—Figwort, Kirkby Lonsdale.

TRANSFERRING BEES.

[5629.] In reference to your correspondent who writes on "Transferring Bees" (5615, page 326), I should like to give my experience. I am only a novice, so what I say must be taken for what it is worth. When I commenced keeping bees, I knew not of the B.B.J. or of the "Guide Book," so had to depend on the knowledge of the man from whom I bought my bees for all I knew. Well, after a while I got Abbott's catalogue, and learned for the first time of the B.B.J. and of the superior advantage of frame-hives (my bees had up to that time been housed in wood-buckets!). However, I had a strong desire to put them in frame-hives, and I got some of these, and instead of following the directions given in the B.B.J. to some correspondents needing to transfer bees, I put my buckets on top bars of the frame-hives in April, and awaited results. Meanwhile, I got the "Guide Book" and thought the matter out to see what I might expect, and what I expected I got. But three of the lots did not go down into the lower hives at all, so I did as "Cymric" did, and came to the same conclusion. I fixed up a platform on which to put the "bucket" hives, and packed all down with flannel and wheat-husk, to keep the bees warm and snug, and they were well supplied with food. But. alas! I had to pay dearly for my experience, for in spring I found two of the three lots dead, and the other so weakened that before they could get up to full strength the season was over, and consequently they have not given me any surplus. Now, I contend that if I had taken the advice you kindly gave and put the buckets on floorboard till spring, and then put them up again, I should not have lost what I did. Pardon me for my lengthy letter; but wit bought is better than wit taught. I send name and sign—Rex, Somerset.

FOUL BROOD AND VAGRANT SWARMS.

[5630.] If we are ever to get a Foul Brood Act there is one matter I should very much like to see included in its powers of action, and that is the power to inspect and deal with all such "stray" colonies of bees as have established themselves in private or public buildings, trees, etc., etc., and that are very likely to have foul brood in their combs. I know of several houses that have had bees in for years, and have noticed that in some seasons they have apparently died out, to be invariably stocked again with bees, probably from some industrious man's apiary close by. Now, suppose such a place to be badly affected with foul brood (and doubtless there are scores of such places), of what earthly use to us would be the best Foul Brood Act that could be framed, *i.e.*, if such places are allowed to remain (as now) foul brood centres; and how thus could foul brood be stamped out? I send name for reference and sign—Old Worker-Bee, Cambs.

HAWKERS' V. PEDLARS' LICENCES.

[5631.] May I draw your attention to the reply to Query 3536 in the B.B.J. for the 1st inst., which is somewhat misleading?

A "hawker" is any person who "travels *with* any beast drawing or bearing burden" to sell any goods, etc. A "pedlar" is any person who "*without* any beast drawing or bearing burden travels," etc. A "hawker" requires a *licence*, which costs £2; a "pedlar" need only have a "certificate" costing 5s. A hawker does not require a licence if he is "the real maker or worker of any goods" which he is selling, and neither hawkers nor pedlars require either a licence or certificate for selling vegetables, fish, fruit, or victuals. Whether honey comes within the first exception may perhaps be questioned, but I think it comes within "victuals," though the case defining the term is an old one, and I have not the report by me.—FRANK O. FIELD, Solicitor, Gosport.

[We are much indebted to our correspondent for making the matter clear from the legal standpoint. On the other hand, it seemed to us—in taking a practical view of the case—that no licence at all was needed to enable a bee-keeper to sell his produce; and Mr. Field's opinion appears to confirm this view, seeing that honey must come within the term food, or "victuals," equally with jams and preserves.—EDS.]

THE HONEY HARVEST IN SUFFOLK.

AN EXPERT'S REPORT.

[5632.] Having just finished a bicycle tour among the bee-keepers of the Suffolk division of the Essex and Suffolk B.K.A., I thought it might possess interest for readers of the B.B.J. to know the result of observations made and the reports of the honey harvest in East Anglia. The present year has favoured experts by providing good weather for cycling. During August I rode 800 miles along rough roads, sandy lanes, over fields, and through brooks—running across roads—usually at the base of a hill, down which I had to travel in zig-zag fashion. Several times it was a case of being ferried over rivers. On one occasion, when first touring in Suffolk, I returned an hour too late for the ferry, and having made arrangements for staying on the opposite side of the river for the night I was nonplussed, but after a search I found a private boat and was then rowed across. On another occasion, while "on tour," I engaged a small sailing boat and kept the two boatmen waiting on the other side, as it was my only chance of returning that day. I was away longer than expected, meantime the boatmen had visited a neighbouring inn, and when I returned one was capable the other incapable—or, in plain English, drunk!—and I was thankful to land on terra firma, carried, as I was, through the shallow water on the back of the sober member of my crew. But I do not "brood" over these thing in case I should fall "foul" of some zealous "expert." But to return to what I saw on my late tour. Stocks located in good districts that were strong and healthy in the spring and favoured with good weather in the honey-gathering time, have given very satisfactory returns for such bee-keepers as are experienced in good management. Given the above conditions, the secret of success is in bees being strong at the right time, with ample room for their work of honey-storing. These conditions are known to the apiarist who understands his work, not only in good seasons but in a season of abnormal climatic changes. Some complain of small yields, others of numerous swarms. I found the latter to be the case in districts where moderate supplies are usually forthcoming. On the other hand, some most encouraging reports were obtained of good yields in quality and quantity, among which are the following:—W. Turner, Brent Eleigh, two single hives, 246 lb., one "Wells" or double hive, 230 lb. (the latter hive, I am told, survives year after year with two queens), total from twenty-three hives, half-a-ton; Miss Turner, Brent Eleigh, 91 lb. extracted from one hive, sixty sections and a swarm from another; the Rev. Machin, Chippenham, from his only hive secured 130 1-lb. sections; C. Bocock, Ashley, got 90 lb. each from several hives, and many others averaging 50 to 60 lb.; C. Ford, Burwell's, averaged 60 lb. from all his hives; Miss H. C. Orford, Castle Hill, Ipswich, averaged 40 lb.; C. Whiting, Hundon, secured 112 lb. from his best hive; C. E. Fisher, Nacton, Ipswich, took off sixty well-filled shallow-frames from two hives. One skep placed over top-bars of a frame-hive in spring worked down and stored at least 30 lb. for winter as well as 25 lb. of surplus honey. "Wells" hives, and non-swarming hives in general, seem to have proved very unsuccessful this year.

It will be noticed that the favoured ones live mostly on the west side of the country, where the largest crops of sainfoin, white clover, beans, and mustard are grown. Nearer the coast some bee-keepers are very fortunate, but further north, the land being marshy, the honey is too often very dark. A few stocks had died out from queenlessness, or been robbed out. I also found cases of waxmoth, and more of foul brood. It is a great pity that some unscrupulous and thoughtless bee-keepers should not destroy stocks to which the term "rotten" is most applicable, and neighbouring bee-keepers would rejoice were it possible to send a competent Government inspector to condemn and superintend the destruction of infected hives. I should like to take this opportunity of warning

intending bee-keepers not to buy stocks on any account unless guaranteed healthy and proved to be such on delivery. One or two persons who recently bought bees in frame-hives and skeps have had to deeply regret not having taken this precaution when purchasing. One unsuspecting person bought some stocks for 7s. 6d. each two years ago. As they were not doing well the expert of the association was called in and at once advised total destruction, which was carried out.

Personally, I am not at all discouraged by seeing disparaging criticisms reflecting on experts, because no properly qualified man possessing ordinary common sense would wish to be careless in manipulating diseased stocks. It is entirely against their own interest to wilfully spread foul brood; their aim and object surely must be to eradicate the pest and to find apiaries healthy and their owners prospering. Experts have too much respect for their clothes to saturate them with propolis and honey containing germs of contagion. Besides, why should they wish to become incubators of disease? One would think the whole atmosphere teemed with myriads of spores of *Bacillus alvei* according to the assertions of some pessimists. I am sure the timely aid of experts in checking the development of disease would gladly be given by numerous bee-keepers were it necessary. For myself, I have had the pleasure of visiting many apiaries in East Anglia, and have endeavoured conscientiously to help as far as possible our County Association, the B.B.K.A., and the industry at large, to maintain the advantages of modern bee-keeping, to make it in every sense progressive. Very few associations could afford to maintain an expert all the year round, and those who leave their occupations for several months at a spell must surely do it for the love of the work more than the pay they get. I found the majority of bee-keepers among whom I have toured very genial and hospitable. One member described an expert I knew well to me as "a philanthropist or public benefactor." According to what I have read in your pages, some people seem to have had a most unique experience of bees and bee-keeping; so much so, that they must surely have lived within a very limited area for the greater part of their existence. But we must hope that as time goes on we shall see them gradually expanding their minds and becoming, like the bees, metamorphosed into the more advanced stage so that we may ere long see them in a more charitable mood offering a friendly hand to the expert in his efforts to promote the good of bee-keeping in its best form.—A. W. Salmon, Expert, Essex and Suffolk B.K.A., Chingford, September 3.

WEATHER REPORT.

Westbourne, Sussex,
August, 1904.

Rainfall, 2·75 in.	Minimum on grass, 35° on 25th.
Heaviest fall, ·59 on 22nd.	Frosty nights, 0.
Rain fell on 15 days.	Mean maximum, 68·8.
Above average, ·08 in.	Mean minimum, 55·1.
Sunshine, 231·7 hours.	Mean temperature, 61·9.
Brightest day, 3rd, 14 hours.	Above average, 2·4.
Sunless days, 1.	Maximum barometer, 30·30 on 3rd.
Above average, 18·2 hours.	Minimum barometer, 29·75 on 31st.
Maximum temperature, 81° on 3rd.	L. B. Birkett.
Minimum temperature, 40° on 25th.	

Queries and Replies.

[3542.] *Bees Transferring Themselves.*—I got a good swarm of bees from my skep-hive on July 6, and housed them in a frame-hive. Six days later, when I thought the young queen would be mated, I placed the parent skep on top-bars of a frame-hive, as recommended in the "Guide Book," and it remained there for three weeks. I then looked to see if the bees had transferred themselves and their brood-nest below, and finding they had not, I began driving at once, thereby soon getting them into their new home fitted with full sheets of foundation. It was a small lot—in fact, they did not cover more than three frames—and although I could not find the queen, I suppose there must be one, because they began work next day, and in ten days had drawn out four combs. They have stored a little honey in new combs, but no brood. Upon examination of the skep after the bees had been driven I could not find any signs of brood. I thought the old queen would have left some, and therefore ask:—1. Can you account for this? 2. Can you also explain why there are no signs of brood in the frame-hive ten days after being driven? The swarm have drawn out seven frames of comb, and there is a lot of brood and honey. 3. Do you think the small lot will pull through the winter without being united? Both lots have been taken on to the moors for the heather. I enclose card and sign—Reader, Yorks, August 15.

Reply.—1. After an interval of "three weeks" from issue of the first swarm there could not possibly be any living worker-brood in the parent skep. 2. A skep of bees that has sent out a swarm is not in condition for dealing with as you have done. It is only strong stocks, the bees

of which are finding themselves cramped for room in brood-nest, that will readily transfer themselves below as stated in "Guide Book." The book in question does not "recommend" such action as you took. With regard to no eggs being found in the new combs, it is probable the young queen will be breeding in the skep overhead. 3. If the queen of "small lot" is prolific and laying well we should not do any "uniting," but winter the stocks singly.

[3543.] *The Season's Disappointments.*—As a reader of your paper for a few months I would like a little advice. I bought a stock of bees last autumn, and in June of this year I found them queenless, and bees dwindled down to a very few. The combs also were mildewed, crooked, and black, with a little honey in the back ones only. The crooked combs I burnt after cutting out the honey, which was very dark in colour. In June I bought another stock on ten frames, supposed to be strong and in good condition. I put the frames of the old hive along with the few bees on top of the new hive for the brood to hatch out, and on June 26 I removed the top frames off and replaced them with a rack of sections fitted with foundation. The bees did not go up for nearly a fortnight. Since then, however, the super has been crowded, but the foundation is not drawn out, but is just as when put on; consequently there is no surplus honey. We have a good amount of heather in bloom about here. They seem a very strong stock, though they have turned out a great many drones. Will it be too late to expect them to store in the sections now (end of August)? If so, I must make the best of things and try to get the bees strong for next year. Were the sections put on early enough; or can you give any reason why the bees did not draw the foundation out? They were very warmly covered. I sign—LANCASHIRE.

REPLY.—The failure to work in sections must be attributable to the poor season in Lancashire, where more or less of failure has, unfortunately, been the rule this year. Your best course will be to remove the sections and allow the bees to appropriate any income they may get from the heather for winter stores.

[3544.] *Removing Surplus from Skeps and Dealing with Unfinished Sections.*—I lifted a skep with a strong stock of bees on to a frame-hive, as advised in "Guide Book," in April last, and the foundation was soon built out, while the bees have been active all the summer. The skep seemed very heavy with honey, so I put it on a "super-clearer" on August 1, but the bees took until August 8 to descend, and even then all had not gone down, so I cleared away the few remaining ones, mostly young drones, with the smoker, and the enclosed queen (?) (I am still, in my second season, inexperienced) came with them. I thought her too young and diminutive-looking to be the mother of the hive, and I could see plenty of brood in the frames below (although I did not disturb them to the extent of finding the queen), so I killed her. I could see no brood between the combs in the skep, but on removing them after I found a small patch of drone-comb on one side, high up. There is a splendid quantity of honey in skep. I therefore ask:—1. Did I do right to kill the queen? 2. How can I best extract the honey? I supered my two other frame-hives with racks of sections in May, and the bees soon filled the first racks, but were slow in sealing; and the second lots of sections, although partly sealed weeks ago, are still not finished. White clover has been abundant, but I suppose the weather has been too dry. 3. Will the bees finish properly if I leave the sections on? There is a little heather, now out, within half a mile, and large tracts of it within a mile. Excuse me troubling you with questions. I have no one to consult, and want advice almost daily.—COUNTRYWOMAN, Cardiganshire, S. Wales.

REPLY.—1. Judging by queen sent, we see no reason why she should have been killed; she has every appearance of being well developed and fertile. 2. The combs must be cut out of skep and, after uncapping, carefully extracted in the machine. It is not certain that the sections will be completed and filled unless weather holds good for the heather near you, but if it keeps as warm as now they may be finished. You should wrap warmly to guard against cold nights, or bees will desert the sections. Heather within a mile will be helpful for a fortnight to come.

[3545.] *Bees in Fowl-Runs.*—I intend to move my bees this winter from kitchen garden into orchard, and in order to keep the grass down I propose to make a fowl-run round the hives. Will you kindly say if a fowl-run will be detrimental to the bees?—C. B. C., Whimple, September 4.

REPLY.—We should not advise locating your hives in a fowl-run unless the "run" was a very large one indeed. Fowls have been allowed the run of an orchard in which bees were kept with no ill effects; but in a wired-off, cramped space, such as is understood as a fowl-run, it might be bad for the fowls, however the bees fared.

[3546.] *Queen Vagaries.*—Will you kindly oblige me by explaining the following? While watching, about a fortnight ago, the entrance to my hive, a beautifully-shaped queen alighted on the en-

trance-board and went inside. About ten minutes later she came out again, and, after quickly gliding over the bees round the entrance, flew away. Was this a strange queen, or a newly-hatched one from the hive taking its mating flight? I have had no swarm this year, but the stock has increased during the summer from seven to nine frames, and the hive stood by itself. It may be interesting to you to know that I have obtained through your advertising column a splendid lot of bees, which have given immense satisfaction. I send name, etc., and sign—APIS.

REPLY.—The question you put cannot be safely answered without inspection of the combs of hive in question. If a young queen has been reared, then an empty cell or cells will be found. The absence of such signs will show that the queen you saw fly away was a stranger.

[3547.] *Bee-keeping in Straw Skeps and Frame-Hives.*—Would you kindly advise me how to proceed in the following case? I bought a swarm in straw skep about seven years ago. As time went on and swarms issued, I hived them all in straw skeps; now I have seventeen stocks, only one of which, a swarm of this season, I put in a large frame-hive about 2ft. 6in. long. On examining this hive the other day I found it contained only six frames, which were filled with comb and honey; the other part of hive was empty. So I ask: Can I drive some of my bees from skeps to fill this hive, so as to strengthen it for next year? I have never taken any honey from any of my bees, only keeping them for the good they do in fertilising my fruit trees.—G. T. W., Jersey.

REPLY.—Instead of driving bees from skeps to fill up the frame-hive, you should contract the space in latter with dummy boards. If the bees cover six frames well they will probably winter all right; and four or five additional frames can be added next spring, as bees require room for brood-rearing. If you intend adopting frame-hives and modern methods of bee-management and honey-production, it will be necessary to procure a "Guide Book" if you hope to succeed.

[3548.] *Native versus Foreign Bees.*—As I intend Italianising my apiary, may I ask you a few questions concerning the Italian or Ligurian bees? 1. Do they work on heather as well as the black species, especially on ling (or bell heather), a plant which does not seem to be frequented by the black species? 2. Do they work on all plants which are frequented by the black? 3. Would it be suitable to cross your "Extra Goldens" with your "Golden Prolific," or your "Golden Prolific" with your "Hardy Prolific"? 4. Would there be much chance of the Italian bees swarming while they were at the heather? 5. Are Carniolans more prolific, more gentle, and better honey-gatherers than the Italians, or how is it they are higher priced? Would they cross well together? 6. Is it true that if an Italian queen is crossed with a black drone the progeny are bad tempered? 7. Will Italians work well on clover? 8. Will they work in bad weather better than the black? Thanking you in anticipation, I send name for reference and sign—NORTHUMBRIAN, Alnwick, September 1.

REPLY.—We print all the questions enumerated above, not with any intention of dogmatising in our replies, because in expressing our views with regard to the comparative merits or demerits of the several races of bees mentioned, we claim no superior knowledge beyond those equally experienced with ourselves. With regard then to queries 1, 2, 4, 7, and 8, our reply is: The Italian gathers from all flowers on which the common or native bee labours, and is very much the same in respect of being industrious or otherwise. Some contend that foreign races surpass the native in many points, while others hold a contrary view. For ourselves, we admit that some Italian queens are very prolific indeed and give excellent results, but the percentage of such queens has not been great in our experience. Regarding query No. 3, our correspondent is labouring under some mistake. We are not breeders of queen bees or dealers in bees of any kind; information respecting "Extra Goldens" or others, must, therefore, be obtained from those of our advertisers who deal in them. In reply to remaining queries: 5. The Carniolans are extremely gentle and quiet-tempered bees, good workers, and easily handled; their fault is a tendency to excessive swarming. 6. Hybrid bees are occasionally vicious, but not always; the point to bear in mind is that the temper comes from the drone, while the working qualities are inherited from the queen.

[3549.] *Uniting Bees from Diseased Stocks.*—Will you kindly say if there is foul brood in the comb sent. I have noticed a rather peculiar smell about the hive all summer, so got the bees from the combs and have united them to a queenless stock with plenty of stores. Have I done right? I send name and sign myself—ANXIOUS ONE, Milnthorpe, September 3.

REPLY.—It was very injudicious to unite bees of a suspected stock to those of a healthy colony without first making inquiry, for we are sorry to say the sample of comb sent is affected with foul brood. It will, therefore, be necessary to keep a

careful watch on the hatching brood in spring of next year to see that it is not diseased.

[3550.] *Pollen-filled Combs.*—In reply to a query, I see you say in your last issue (page 338) that when combs are nearly full of pollen the usual course is to do away with them as being worse than useless. 1. Would this apply to combs the upper portion of which to the extent of one-half or two-thirds, is filled with honey and remainder with pollen at the present season? 2. Would this pollen not be utilised for brood later in the season or early in the spring, or be removed by the bees if not so required?—SUSSEX DOWNS, September 1.

REPLY.—Cells half-filled with pollen and remaining half with honey are very useful, if not too many such in a hive. The honey preserves pollen from becoming hard and useless, and serves a good purpose in early spring. 2. Yes.

Echoes from the Hives.

Castle Cary, Somerset, August 20.—My bees started the season very well. The apple blossom here was superb, the best that has been seen for a long time, and the bees rapidly gained in strength, one hive filling the end frames of a fifteen-frame hive and sealing same over beautifully. But after that honey came in slowly, and weather has not favoured us bee-keepers down here. With supers on early, and from my best stock I got only twenty-one sections, and from other hives about 30lb. of extracted honey.—R. LITMAN.

Bee Shows to Come.

*** We are requested to state that the time of closing entries for the Derbyshire B.F.A. Show has been extended to September 10 (see below).

September 13, at Woodstock.—Honey Show of the Oxfordshire Bee-keepers' Association in conjunction with the Woodstock Agricultural and Horticultural Association. Open classes for single 1-lb. section, and single 1-lb. jar extracted honey. Prizes 7s 6d., 5s., and 2s. 6d. (entry free). Schedules from H. M. Turner, Hon. Sec., The Turl, Oxford. **Entries close September 10.**

September 14 and 15, in Waverley Market, Edinburgh.—Eleventh Exhibition of the Midlothian B.K.A. in connection with that of the Caledonian Horticultural Society. **Entries closed.**

September 14 and 15, at Derby.—Derbyshire B.K.A. Twenty-third Annual Show of Hives, Bees, and Honey on the show ground of the Derbyshire Agricultural Society. Five open classes for honey, and collection of bee-appliances. Schedules from R. H. Coltman, Hon. Sec. D.B.K.A., Burton-on-Trent **Entries close September 10.**

September 15, 16, and 17, at Crystal Palace.—Surrey Bee-keepers' Association Annual Exhibition of Bees, Honey, Wax and Appliances, &c. **Entries closed.**

September 17 to 24, at the Agricultural Hall, London.—Honey Show in connection with the twelfth Annual Exhibition and Market of the Grocery and Kindred Trades. Numerous classes and liberal prizes for comb and extracted honey and beeswax. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad-street, London, E.C.

Special Notice.—In connection with above Show there will be a *Working Exhibit* illustrative of modern Bee-keeping and Honey-production, including *Demonstrations* with *Live Bees* and extracting honey from combs for sale by skilled experts. (See large advt. p. v.)

October 4 to 7, at the Agricultural Hall, London.—Show of Honey and Bee-produce in connection with the British Dairy Farmers' Association. **Entries closed**

Notices to Correspondents & Inquirers.

E. L. (Stirling).—Feeding Bees in Autumn. Preventing Swarming.—1. The footnote below recipe mentioned explains what may appear a discrepancy, leaving it optional to use either soluble phenyll or naphthol beta in syrup used. As a rule, we recommend No. 6 recipe for autumn feeding. 2. We do not know what "book by a hive maker" you refer to, nor can we endorse anyone's statement as regards the efficacy of non-swarming hives in ensuring the prevention of swarming. What we do know is that room given below a crowded brood-nest in early summer time tends to prevent swarming, because it allows for a natural extension of the cluster downwards. And if the added space contains frames—or sections—fitted with foundation the bees will start work on the latter very readily. Then if the lower chamber is removed bodily—bees, combs, and all—overhead, it relieves the crowded brood-nest, by starting the bees on the work of surplus storing, and more or less prevents the tendency to swarm. 3. We are obliged for note *re* misprint; you are right in this.

AN OLD SUBSCRIBER (Wilts). — We have no means of judging what has caused the larvæ in cells to die, as no particulars are sent with regard to what may have caused the trouble. The sealed brood seems in normal condition, while most of the uncapped larvæ are protruding from the cells. Our view is that something has been done to cause this, but what that "something" is we cannot even guess.

A. ADAMS (Maidstone).—Starting Feeding for Winter.—1. When supers are removed and contents of brood-chambers have been examined, the sooner feeding-up for winter is begun the better. For the first week or two the food should be given slowly to stimulate late breeding; then as rapidly as bees will take syrup down, so that the food may be sealed over before cold weather sets in. 2. We do not know where fully-detailed

particulars of how to make a good observatory hive can be had.

W. H. Ley (Stamford), and S. Wright (Bury St. Edmunds).—Hawking or Peddling Honey. — You will find a "legal opinion" regarding the above question on page 354 of this issue, which makes the matter clear.

A. E. Brabrook (Downton).—Age of Queens.—Queen bee sent is of the native or common brown variety. It has every appearance of being a young one, but age of queens cannot be safely judged from inspection of a dead insect.

R. W. Lewis Lloyd (Rhyader).—Insect Nomenclature.—The specimen sent is one of the saw-flies (*Sirex gigas*).

Honey Samples.

Shylock (Macclesfield).—Honey is of fair quality, but not of high quality for table use. We cannot define the source from whence your sample was gathered, as it contains an admixture of honey dew, which spoils it. The reddish colour gives it the appearance of being from the *Trifolium incarnatum* (crimson clover). Honey from borage is rather dark in colour, but not nearly so dark as sample.

G. M. (Leicester).—The jar sent contains granulated honey of very good quality. We cannot understand why there should be any "mystery" as regards contents of jar.

P. L. Fison (Leeds).—Sample is in good condition for table use at present, but we cannot vouch for its keeping well after having been fermented.

Dych (Stafford).—Your sample is almost wholly honeydew. It is unsuitable for anything but bee-food.

J. C. S. (Handsworth).—Sample is only fit for bees' use as food.

C. Coster (Potters Bar).—Both samples are good for so adverse a season as this for good honey. No. 1 is bad in colour, but No. 2 fully equals it in flavour.

Suspected Combs.

White Heather (Cockermouth).—We find foul brood of old standing in a few cells only of sample. Nearly all sealed cells are empty, the contents having quite dried up or gone. We should not think of using such combs, but melt them down for wax.

Wistonian (Colchester) and H. Brown (Cheshire).—Samples affected with foul brood.

C. E. P. (Glamorgan).—Sample of comb shows a plain outbreak of foul brood. It is only developing, and may be checked if prompt preventive measures are taken.

T. Williams (Lincoln). — We find no "F. B." in either piece of comb, but samples are unsuitable for judging from; we should have some few cells with a trace of fresh larvæ in them. Sugar as samples, either loaf or crystals, is suitable for bee-food if pure cane, but beet sugar is not good for bees.

J. B. A. (Lancashire).—There are traces of foul brood in comb. Disease is not of virulent type, judging by sample. It seems to be of old standing, but if remedies are used the bees may recover now they are on new combs.

Special Prepaid Advertisements.

Twelve words and under; Sixpence; for every additional Three words or under, One Penny

Advertisements for current issue must be received by first post on Tuesday.

HEALTHY DRIVEN BEES, 4lbs., 5s., 5lbs., 6s. Safe delivery. Boxes 2s., returnable. Davidson, Expert, Beecroft, Basingstoke. D 38

BEES FOR SALE, about 20 strong stocks, also quantity of Bee Appliances. Can be seen by appointment. Thomas Reid, 80, Mitcham-lane, Streatham, S.W.

FOR SALE, ½-ton Light Extracted HONEY. Sample and price, 3d. Barnes, Burwell, Cambs. D 32

WANTED, SECTIONS and CWT. Light Extracted HONEY. Sample, and lowest price delivered, to Hiscock, 129, Oxford-road, Rea ing D 34

20 LOTS HEALTHY DRIVEN BEES FOR SALE. 3s. 6d. per lot. Wooding, Sutton, Beds. D 35

GUARANTEED HEALTHY DRIVEN BEES, 1904 Queens, 4s. to 5s., strong stock; fertile queens, 2s. 6d.; stocks in skeps, well-provided stores, 1904 queens (healthy), 12s. 6d. to 13s. 6d. W. Woods, Normandy, Guildford. D 43

WANTED, DRIVEN BEES, 3 lots, 4 lb. each. Quilliam, Ballacain, Onchan, Isle of Man. D 36

BEST QUALITY 1-lb. SCREW-CAP HONEY JARS, 15s. 9d. per gross in 3-gross crates. John Harvie, 1, Royal Terrace, Springburn, Glasgow. D 31

FOR SALE, 1 gross screw-top Jars of HONEY, medium coloured. W. Fake, Massingham, King's Lynn. D 42

DRIVEN BEES, with Queen, 3s. 6d. per lot, package free. H. W. Glover, Fauld, Tutbury, Staffs. D 41

QUEENS. — Virgins from 1s., Fertiles from 2s., Nuclei, 7s. 6d. Dawkins, Sutton Coldfield. D 40

DRIVEN BEES, 4s. 6d. per lot; in small skep, 1s. 6d. Clements, Harbledown, Canterbury. D 39

FEW QUEENS, cheap to clear in Introducing Travelling Cages, 2s. each. Seeney, Tiddington-road, Stratford-on-Avon. D 33

FOR SALE, pure bred WHITE WYANDOTTES COCKERELS, March hatched, 5s. each. H. Morgan, Lone-lane, Penalt, Mon. D 30

YEW TREE FARM, Wilsford, Pewsey, Wilts, one mile from Woodborough (G.W.R. Stn.).—G. T. SMITH is favoured by Lot, Miles, & Sons, who are leaving the farm, with instructions to SELL BY AUCTION, on MONDAY, SEPTEMBER 12, at 11.30 p.m., the CONTENTS of APIARY, consisting of 30 Stocks of Bees in frame-hives, with their Honey; "Cowan" Reversible Extractor and sundry Appliances; also 150 Head Pure Bred Poultry, consisting of Black Orpingtons, Black Langshans, Indian Game, White Wyandottes, Six "Pocock's" Patent Egg-boxes, together with Live and Dead Farming Stock. D 29

STRONG STOCKS OF BEES, in skeps, for sale, 12s. 6d. each. H. Broughton, Barrow-on-Humber, Hull. D 12

DON'T BE STUNG! Use the "Burkitt" Bee Glove. Pronounced success. Very light in substance. Unsolicited testimonials from all parts. Price 2s. 6d. per pair. With self-adjusting Sleeves, 3s. 6d. per pair, Post-free from Edward Reynolds, Sole Maker, Andover, Hants. Special terms to agents.

FINE tested 1904 QUEENS, reared from selected workers, hardy and prolific, 3s. 6d. each. Bees 1s. 6d. per lb. for 5 lb. lots and over. Guaranteed healthy and safe arrival. Whiting, Valley Apiaries, Hundon, Clare, Suffolk. C 95

Editorial, Notices, &c.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of August, 1904, was £2,250.—From a return furnished to the BEE-KEEPERS' JOURNAL by the Statistical Office, H.M. Customs.

HONEY SHOW AT BARNTON, CHESHIRE.

In connection wita the Barnton Floral and Horticulaural Society a show of honey was held on August 27. The entries were very satisfactory, considering the unfortunate season. There were two classes open to the county of Cheshire and members of the C.B.K.A., along with six local classes. Mr. W. Bradburn, Brooklands, Sale, officiated as judge, and made the following awards:—

Twelve 1-lb. Jars Extracted (Light) Honey (County). — 1st, J. Pimlott, Altrincham; 2nd, H. Potts, Dutton; 3rd, W. Cartwright, Moore, Warrington; v.h.c., F. Wilkinson, Dutton; h.c., G. Lambert, Comberbach, and A. Thorpe, Wistaston.

Beeswax (1-lb. Cake).—1st, G. Lambert; 2nd, J. Wrench, Hartford; 3rd, H. Potts.

Six 1-lb. Jars Extracted (Light) Honey.—1st, G. Lambert; 2nd, T. Clare, Barnton; 3rd, J. Wrench; v.h.c., N. Yould, Barnton; h.c., W. Lightfoot.

Six 1-lb. Jars Honey (other than Light).—1st, G. Lambert; 2nd, J. Wrench; 3rd, W. Lightfoot.

Three 1-lb. Jars Granulated Honey.—1st, G. Lambert.

One Shallow-Frame Comb-Honey (for Extracting).—1st, G. Lambert.

Beeswax (½-lb. Cake).—1st, G. Lambert; 2nd, W. Lightfoot; 3rd, T. Lightfoot.

Best Honey Trophy.—1st, G. Lambert.—(*Communicated.*)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

FOREIGN HONEY IMPORTS.

[5633.] The general opinion prevails that the foreigner is flooding our markets, and that the Colonial imports are increasing at an accelerated pace, so that the home product will be crushed out. On the other hand, I believe that home honey is in increasing demand—at least, at a paying price—although, from the producers' point of view, we would all, perhaps, like to see this latter feature enhanced. Being anxious to know if imported honey was increasing in bulk or value, I have examined the available statistics, with the result that I can calm the minds of anxious bee-keepers, and report that for over a dozen years at least our honey imports have been practically stationary, and that, if anything, they have rather decreased. Here is a table showing (A) value of six years' imports, 1892-97; and (B), 1898-1903:—

	A.		B.
1892	£62,528	1898	£24,533
1893	29,087	1899	27,124
1894	33,472	1900	29,491
1895	41,302	1901	42,837
1896	29,296	1902	27,116
1897	21,861	1903	30,349
Total.....	£217,546	Total.....	£181,450
Average...	£35,258	Average...	£30,242

From the above figures I deduce several facts. Leaving out the abnormal year 1892, each of the six-year periods shows a total almost identical — £181,450 — and both average almost exactly £30,000 for honey imports each year. Once in each of the tables it will be seen they exceed £40,000; while in one instance in each case they fall to very nearly half that sum.

The reason why for each of these points is not easy to discover. Thus, in 1895, a poor season, the imports were high, leading us to conclude that the Colonial and foreigner wished to compensate us for our failure by sending us an extra supply; but this argument is impaired by the fact that in the next table the large quantity occurred in 1901, a year when we had a splendid yield. And then, during the last two years, when over a large area the honey-crop was next to a failure, we were favoured with consignments rather below the average. This last fact is somewhat of a puzzle to me, as I would have expected a large influx.

I had compiled other tables showing the imports for the first six and the last six months of the above years, and for the winter and summer periods, but I need not inflict them on readers. It may be sufficient simply to state that for the periods January to June and July to December the amount is pretty evenly divided. But for the winter and summer periods the case is quite different. Almost double the quantity is imported from April to September

compared with the supply sent us in the six months October to March. Several years the disparity is far greater. Thus in 1895 it stood as 31 to 11, or almost three times as great, and in 1902 as 21 is to 5, or more than *four* times. All over, it is about 11,000 during the winter season to 20,000 during the summer, whereat I am again puzzled, as I should have thought the astute importer would have kept up the supply when the home product could not be got, and so introduce most in our dead season.

The value of the imports varies very considerably for the different months at times. Thus, one month of June it reached £10,000, and one February fell as low as £250. The perpetual fluctuation shows that no well-marked law or rule exists regulating the flow of foreign honey to our shores. If such prevailed we could take special comfort from the fact that the month of January this year showed a record for smallness, for only £161 worth of honey is recorded as imported during that month as against an average of rather over £1,000 for that month, and at least in one case £13,000. Going back to another six-year period anterior to 1897—viz., from 1891 to 1896—we find imports higher still, as they amount to over £234,000, giving an average of £39,000 against £36,000 and £30,000 in my table. Whatever these statistics prove, they certainly show that the foreigner is not seizing on our honey market.—D. M. M., Banff.

FOUL BROOD INSPECTION.

THE PRACTICAL SIDE OF THE QUESTION.

[5634.] I have been waiting for an abler hand than mine to follow Mr. Swabey in his remarks (page 335 of B.B.J.) regarding the practical side of the question as to inspectors' visits. Taking for granted that the inspector would be a properly qualified expert, not a just-fledged third class one, it is amusing to imagine such a man visiting, say, Mr. Woodley's apiary when fully supered, and beginning to pull the supers off one by one when getting at the brood-nest in order to look for foul brood, as some of your correspondents seem to imagine he would do. Why, if the need arose he would lift the supers off in a bunch if not too heavy, as I have myself done in scores of cases. But I think your correspondents are making "a mountain of a molehill," for a foul-brood inspector would want to get most, if not all, of his inspections over in spring before supering was begun, and later on in the season he would find plenty to do in apiaries where disease was known to exist without interfering with those which were in full, prosperous work. On the other hand, if he did visit a large apiary later on he would only be too pleased to stand by and let the owner open a stock or two for inspection, and then judge for himself if he might take the rest for granted, knowing that he was urgently wanted elsewhere. After more than a dozen years' costly experience of foul brood, I do not think that bee-keepers need be so very much afraid of the inspector spreading disease by carrying infection about. There is some risk, no doubt, but not a great one, because we know that healthy stocks exist amongst diseased ones for season after season. I have examined up to fifty stocks of my own in one day in spring, some healthy and some diseased, and found the healthy stocks none the worse, although I did not disinfect my clothes. I had also a stock under my supervision for several years which remained perfectly healthy, although I examined them carefully at least twice each spring, wearing the same clothes as what perhaps an hour previously I had on when amongst my own hives, some of which were diseased. My experience is that stocks which are healthy in spring remain (in a normal season) healthy throughout the year.

I am very careful myself never to allow bees to get at any comb or food but their own on my premises. My roofs are all bee-tight, so that when feeding no robbers could get in. If an odd bee gets into my honey-room it never gets out again alive. Unfortunately, my neighbours will not do likewise, the result being that every spring I find it necessary to clear out some diseased hives, which are replaced each autumn with driven bees (I worked on the non-swarming system). If the disease once gets a hold in Mr. Farmer's neighbourhood he will soon be as eager for compulsory powers as others are. All stocks in this neighbourhood appear to be healthy at present; but in April last, when making a friendly examination of some stocks, I found a bee-less hive, in which was some dead brood, that I strongly suspected of being "foul." The owner promised that he would burn them; but to my surprise, I found, in July, that he had used some of these combs for a swarm, and the others were thrown out in the open garden. There would be nearly 20 lb. of honey in the combs, a rare feast for the bees; but what about next year, if these combs were diseased? All stocks up north here are sent to the heather, and it seems to be the fashion to place a lot of inferior honey outside in the garden to fill the hives up ready for the heather. What a glorious way of spreading foul brood! I send name, and sign—NONDESCRIPT, Northumberland, September 10.

EXPERTS AND FOUL BROOD.

[5635.] Mr. Woodley, in his "Notes by the Way" (5616, page 333), takes it for granted that an expert on "tour" takes no precautions to disinfect himself or his appliances. Many things have been done in the past that are not done now, and I think experts are quite alive to the terribly infectious nature of foul brood. If an expert takes measures not to handle diseased stocks more than is absolutely necessary, and to disinfect himself and his appliances, there is very little fear of his spreading the disease. Can any one give a well-authenticated case where an expert has ever carried the disease to a healthy apiary, after disinfecting his hands and appliances? May I also remark that if an inspector had compulsory powers, he would not need either to obtain consent of, or make conditions with the owner of an apiary before examining his stocks. With regard to the "sinister suggestions," my remarks were based on actual experience, but if the cap fits Mr. Woodley I cannot help it. An expert does not always call on a member with the idea of "teaching" him; though, no doubt, there are many things that the younger generation might teach the grandmothers—apart from "sucking eggs"—if they would be willing to learn.—J. Herrod, Trentside Apiary, Sutton-on-Trent, Newark.

KEEPING COMB-HONEY LIQUID.

[5636.] Referring to Mr. Woodley's remarks in his "Notes by the Way" (5626, page 352), it would be interesting to myself—and, I have no doubt, to my brother bee-keepers—to know by what method comb-honey is kept in a liquid state during the cold winter months, as my own experience has been with both comb and extracted honey that it granulates in cold weather. I trust Mr. Woodley will give his younger brethren in the craft the benefit of his method of preservation of comb-honey in liquid form.—Josh. D. Watts, Lower Edmonton, September 9.

REVIEWS OF FOREIGN JOURNALS.

By "Nemo."

In *Le Rucher Belge* M. Reidenbach propounds new ideas with respect to disinfection of hives. He says it is well known that bacteria are the cause of a great deal of mischief in hives, but these are in a measure protected from the depredations of these microbes by the formic acid, tartaric acid, and ethereal oils of the nectar. Formic acid in small quantity is found in the poison of bees, but exists in much larger quantity in the larvæ, and in combs that have been bred in. He was able to extract from a piece of comb weighing 41 grammes about 36 milligrammes of formic acid. He found none in virgin comb. He concludes that the object of this acid is to preserve the nitrogenous food of the larvæ, and consequently to prevent fermentation and resulting disease. Damp prevents the evaporation of this disinfectant, and predisposes colonies to disease; therefore it is important to secure good ventilation, so as not to deprive the hive of its weapon against the bacilli. Another means of disinfection is in the tartaric acid found in the head-glands, which for a long time were supposed to contain formic acid. M. Reidenbach's researches have shown this to be so, for formic acid is very volatile and is rapidly dissipated in the air, but he found appreciable quantities of acid in the dry royal-jelly several years old, which showed it to be not formic but tartaric acid. This not only inverts cane sugar, but is of greater importance in the food of larvæ, as it changes by oxidation into formic acid. A third means of disinfection is in the ethereal oils found in honey. It is these that produce the aroma escaping from the hive during a rapid ingathering, or that attract the bees to the flowers, and give to plants like fennel, mint, and thyme their healing virtues. Their action in a colony is inestimable, and they assist in preparing a healthy food, and while arresting the development of bacilli give vigour to the colony. An active and vigorous colony produces a large quantity of formic and tartaric acid, and with a rapid flow of nectar the ethereal oils increase and the bees are in a good condition to defend themselves against foul brood. He concludes by advising the bee-keeper to look after the sanitary conditions of his hives, to be sure that they have proper ventilation and good food—in fact, that they should be in a state to always produce the natural disinfectants to maintain the colony in a healthy condition. There would then be little to fear from foul brood.

In the *Rocky Mountain Bee Journal* H. C. Moorhouse says that spreading brood in spring does not always pay. Others things being equal, the colony will expand the brood-nest as fast as there are bees to properly take care of the brood. He also concludes that stimulative feeding does not always pay, and that it only pays to feed for stimulative purposes when the colony is in actual need of the food for consumption.

The *Corrispondenza Apistica* publishes some reminiscences of a M. Fe lele Fe lerici, a noted Italian bee-keeper. M. Federici, speaking about the possibility of people becoming prosperous from bee-keeping, and after instancing C. Dadant, who went to America a poor man and became very well-to-do, mentioned a friend of his who was a very small proprietor and who

was persuaded to start bee-keeping fifteen years ago. Last year this friend said, "When I decided to follow your advice, my family was in a very critical condition. We had debt amounting to 8,000 francs, and we did not know what to do. To-day I have no debts, and I have purchased two pieces of land, have several thousand francs laid by, and I lead an honourable life. I have two sons, who, instead of becoming lawyers or doctors, will follow as bee-keepers."

In the *American Bee Journal* we find the following recipe for honey and almond cream:—Honey, 1 oz.; powdered castile soap, ½ oz.; oil of sweet almonds, 13 oz.; oil of bitter almonds, ½ drachm; oil of bergamot, ¼ drachm; oil of cloves, 7 drops; balsam of Peru, ½ drachm; liquid potassa, ½ drachm. Mix the oils with the balsam, then mix the honey with the soap; add enough of the potassa to make a nice cream; add this to the first mixture, and beat for several minutes.

In *Le Rucher Belge* M. van Hay does not advise making artificial swarms in districts where honey harvests are abundant, and where the pasturage is poor he considers moderate-sized natural swarms give the best results. In the same journal M. Levieux relates that he Americanised one of his hives with one of the highly-praised golden queens. He received her in September, and in the spring, although the population increased, few bees flew any great distance, and only circled round the hive, to return as quickly as possible. This colony perished, as the queen became a drone-breeder. M. Levieux attributes the idleness of this race to the climate being too cold.

In *L'Abeille de l'Aisne* a recipe is given of a simple apifuge:—Collect elder flowers when fully blown, or just as they are commencing to fade, remove them from the green stalk, and place them in a wide-mouthed jar, not more than three-quarters full, then cover with strong vinegar, and allow it to infuse for six weeks or two months, taking care to keep the jar covered with paper. It is then strained through a cloth, and placed in well-corked bottles for use as required during operations with bees. Before opening hives some of this vinegar is rubbed on hands, and if repeated from time to time not a bee will sting. The writer has used this apifuge now for three years, and asserts that it has always been efficacious even in long and delicate operations.

We read in *L'Apiculteur* that at the Congress of Bee-keepers, held in Paris on July 12 last, the Abbé Bédé asked the opinion of those present on the beating of honey, and whether it was always done. The replies showed that two methods were employed for obtaining nice granulated honey, namely stirring and beating. Honey is stirred before putting into jars to make fine granulation, and is beaten up to make it white and smooth like butter. M. Beuve added that the beating up must be done during warm weather and when the air is dry. However, it was a process that was going out of favour, and did not improve honey. At the same meeting a resolution was passed asking the Apicultural Societies to encourage the translation of foreign books on bees, and to purchase rare apicultural works.

In the *Bulletin de la Société d'Apiculture de Tunisie* M. Lukomski says that the poison of bees is endowed with most powerful antipyretic properties, more so even than quinine, and is a specific in fevers, a few stings being sufficient to arrest intermittent fever or malaria, even in its worst form. All the hymenoptera, humble and other bees, wasps, and hornets, have the same property.

The *Bienenwirtschaftliches Centralblatt* states that M. Ziche has succeeded in wintering a swarm of bees without combs for them to cluster upon. The hive was placed in an attic above a room that was well heated, and the swarm was fed with liquid honey. Up to the month of March last the bees had not built any combs. It has, however, become a good colony during the season.

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

The workman-like apiary of Mr. W. Vokins, shown on opposite page, is in no way suggestive of its owner having made his first start with bees in skeps so recently as 1901; especially when we learn that all the hives seen are home-made. Knowing, also, that Mr. Vokins' wife and daughters are the willing assistants who have helped our friend in his rapid progress as a bee-keeper, we are glad to see them shown in the photo along with himself. For the rest, the following useful "Notes" need no addition from us. He says:—

"In answer to your request for a few notes to accompany the photo of my apiary, I first began bee-keeping in March, 1901, with two skeps, and in the course of that season got two swarms from same; but in the autumn I lost the two parent stocks through robbing. However, I borrowed an old copy of Cowan's 'Guide Book,' and made four hives out of old boxes, etc., in a rough-and-ready way, but compared with my later hives these first attempts are a disgrace to the rest. My advice, therefore, is get good new stuff and make your hives well; it will be

found by far the best in the end. At the back of hives are my wife and two daughters and myself, all of whom render me great assistance in such bee-work as fixing foundation, etc. I am afraid the hives look too much crowded, but I have painted the alighting boards of various distinct colours —white, black, yellow, red, etc., so as to give the queens and bees a fair chance of finding their home. Last year I took several lots of bees from trees. On one occasion I laboured ten hours in getting 10 lb. of honey, so you see there is not much profit in that sort of job. I found one great drawback in my working arose from buying some foundation from a man in Kidderminster, and afterwards find it is no use looking at every sixpence spent, and wondering if it will ever come back. I have, however, had a good number of swarms this year. One that came off on June 14 has now nine frames of honey above brood-nest, and three came out on June 29, united in one lot, and were hived in one hive on twenty frames filled with full sheets of foundation. On August 2 I took 30 lb. of honey from this lot. I have not yet ventured on showing honey, as I am quite a young hand at the craft. Indeed, I have never even heard a lecture on bee-keeping nor had any expert advice whatever, so what little I know is entirely gained from the 'Guide Book.' I have also always found that

MR. W. VOKINS' APIARY, UPPER ARLEY, BEWDLEY, WORCESTER.

covered to my loss that the bees will not work on it. I now buy all my foundation from a well-known dealer. I also got some hybrid queens from the same dealer, and find they are working wonderfully well. As seen in the photo, I have a good number of hives, seventeen of them being occupied, the rest are made ready and waiting for driven bees. Last year I drove ten or a dozen lots, but only brought two safely through winter, so I hope to do better this time. I cannot boast of any great 'takes' of honey, as my short experience has been in bad seasons. I have not taken more than 1½ cwt. of surplus this year, but I hope to be able to get back some of my outlay when a good honey flow comes. I whenever I departed from its teachings I always did wrong, especially in introducing queens to only a small number of bees. I have also to pay a tribute to your valuable journal, from which I have gained a lot of good advice, especially from its query and reply column, from which I have invariably been able to get useful advice, given to other inquirers. I am afraid these few notes are not either very interesting or useful, as I only class myself as a beginner; but I hope to keep going step by step until I gain the experience which makes one's notes useful. I wish all brother bee-keepers a good harvest from the season which is now drawing to a close."

Queries and Replies.

[3551.] *A Beginner's Queries.*—Will you kindly advise me as to the following:—I started bee-keeping in November, 1903, with a stock on eight frames. After studying Mr. Cowan's "Guide Book," and following its guidance, I have been successful in the various manipulations required since that time. Owing to swarms from my first stock, I now have three colonies in frame-hives, two of them supered, with one shallow-frame box each. On examining my three hives on August 27 in order to ascertain their condition, I found about five or six of the shallow-frames on each of the two swarms well stored with honey, while the brood-nest of the parent hive is very crowded with bees. The other two stocks had in their brood-chambers eight and nine frames respectively, and all well covered with bees. Not feeling disposed to buy an extractor this year for so small an amount of surplus honey, I took the excluders off, and replaced the supers. I therefore ask: 1. Will the bees remove the honey now in supers down into the brood-nests, as there appears to be very little honey stored below? There was a little brood in centre frames, but not much. I may say that bees were fed gently in spring, according to "Guide Book," until the end of May this year. 2. Seeing, then, that I have plenty of bees, ten shallow-frames of honey, along with some little sealed food in brood-nests stored around the margin of the combs, my next question is: Can you form an opinion as to what kind of honey-producing district this will be in view of the fact that this has been a very dry season? 3. Also, do you know of any means of taking honey from combs without the aid of an extractor? Any advice you can give with regard to my future management will be greatly appreciated. I send name for reference, and sign—WALLASEY, Liscard, Cheshire, September 1.

REPLY.—1. After removal of queen-excluders, it is by no means certain that the bees will carry the sealed honey in shallow-frames to the body-box below. Indeed, the probability is that the bees will take possession of surplus chambers and remain there all winter. To prevent this occurring, lift off the shallow-frames, and place on top-bars of body-box a couple of quilts (with feed-hole in centre). The shallow-frames are then replaced, and — after scratching or bruising the surface of cell-cappings of one frame—lay on a single light quilt of calico weighted down to prevent bees from escaping at top, and cover all down. Examine in a day or two, and if uncapped honey is gone, repeat the operation with other capped combs till all is carried down. The object aimed at is to keep brood-chamber warm while chilling the shallow-frame box, and so inducing bees to remove the food below. 2. Our personal experience, dated a dozen or more years ago, of Liscard is rather against it as a honey district; but your experience of this year is fairly good for so poor a honey season as this has been in Cheshire. 3. There is only one way—viz., the method of slicing up combs and straining them through a bag of muslin or flannel in front of a fire. This was the only plan used before the honey extractor came into use.

[3552.] *Uniting Bees after Driving.*—Will you kindly advise me in your valuable B.B.J. on the following subject? I have the offer of three skeps of bees from a person four miles from home for the trouble of driving them. My difficulty is: I want to drive the three lots into one skep, which latter I shall have to take with me. I therefore ask: 1. How should I proceed in order to avoid losing some bees? Also, what time would be suitable for operating?—DR. JOHN HERBERT, Neath, September 5

REPLY.—The safest plan will be to provide a couple of bags of coarse scrim-cloth (or very open canvas) in addition to the skep for driving bees into. The bags should be large enough at open end to allow of them being passed over the skep. When the first lot is driven, pass the mouth of bag over open end of skep, and, while holding the skep and bag firmly in your hands, with a sudden jerk throw the bees into bag, and then quickly secure the mouth with string, and hang up till ready for starting homewards. Do the same with second lot of bees. The third lot may be secured in the skep for carrying home. Then hive the driven bees at dusk same day by throwing the first lot from skep in front of frame-hive, and when part have run in, throw out a lot from bag on top of the others, and so on with the third lot, thus letting them unite of themselves by running into the frame-hive.

[3553.] *Queen Killed and Cast Out.*—I should like to have your opinion and advice on the following. I enclose a dead queen bee; can you tell me if she is a young or old queen, also could you name the possible cause of death? I am quite a beginner in bee-keeping, only having started in June last, when I bought a very weak stock on six frames headed by a two-year-old queen. My object was not honey this season, but experience and study. I have made a point of strengthening the stock, and it is considered a strong one on ten frames. I was anticipating going through the winter and starting well in the spring,

but about three weeks ago queen-cells began to make their appearance, which the bees have destroyed with the exception of one cell, from which, to all appearance, a queen has hatched out. Last Saturday, during the afternoon, I happened to be watching the flight-board, being suspicious that the old queen had suddenly gone or met with an accident, there being no signs of her laying, when I saw a queen come out on the flight-board. No commotion was made, however, but away she flew. I waited, and in about a quarter of an hour I saw her return and just as quietly re-enter the hive. (There are no drones to speak of, as they have been killed and turned out.) The following day I found the queen I send you dead outside the hive. I am now undoubtedly without a queen, and have just ordered a young fertile one from one of your advertisers. On Sunday, the day I found the dead queen, the hive was attacked by robbers, but I was fortunately able to stop it before any serious damage was done. My hive is now quite minus of eggs or brood of any description, and not particularly strong in stores. Have I anything to fear if I at once introduce new queen; also, can you account for the queen sent being killed off so late in the season? Any information or instruction from you will be greatly valued.—S. FIELDER, Roseville, Bramhall, Cheshire.

REPLY.—Queen is evidently a virgin, but seems to have been "balled," as all pubescence (or hairiness) has gone. You should have made quite sure that stock was queenless before introducing another.

[3554.] *Changing Locations for Bee-Hives.*—I would esteem it a great favour if you would say:—1. Would I be doing right in changing the situation of my bees about 350 yards from where they were before I took them to the heather? I want to bring them to their new stands right from the moors. 2. Which is the most humane method of killing an old queen one wants to supersede? Thanking you in advance—H. JACKSON, Co. Durham, September 10.

REPLY.—1. There will be no risk of losing bees by changing locations as proposed. The fact of hive being away at the moors for several weeks entirely removes any chance of bees returning to their original home-stands. 2. By pressing the thorax sharply a queen bee is killed in a second of time.

[3555.] *Beginners and Increasing Stocks.*—I am a beginner in bee-keeping, having but one hive, consisting of a strong English stock on ten frames. I want to have two or three hives for next year's work, and I should be obliged to you if you would tell me the best and cheapest way of increasing my stocks. Shall I wait until next year, and then buy a stock or a swarm, or could I now buy some driven bees, put them in a hive together with, say, three frames of brood and bees from old hive, and three frames with full sheets of foundation? 1. Is it too late for this last plan, and would it be necessary to feed until the driven lot had got 20 lb. of stores? 2. If I adopt the latter plan, would it be best to fill up the old hive with full sheets of foundation, or leave them to winter on the seven frames now in the hive? 3. Can you tell me if the Canadian balsam is a good honey plant? I enclose name and address, and sign—A BEGINNER, Putney, September 5.

REPLY.—1. The "cheapest" way is to increase by artificial swarming, as directed in the "Guide Book"; but you cannot expect to get increase and surplus honey the same season. It therefore becomes a question of outlay if profit is looked for. On the other hand, driven bees may be worked up into stocks if given frames of comb from an established stock; but we do not advise a beginner to try this plan so late as mid-September. 2. If frames are taken away we advise wintering the bees on those remaining. 3. The Canadian balsam is useful for late pollen; but it yields no appreciable amount of honey unless grown in large quantities.

[3556.] *Do Bees Carry Infection?*—I was recently asked by a mistress of a school if bees are known to carry infection, and I should be glad if you would kindly give me your opinion on the question. I said I had never heard it mentioned, and did not see how it could be possible for them to be ranked on a par with the mosquito. This lady attended an educational meeting in Worcester, at which it was advocated that bee-keeping should be taught to children in schools, but it was strongly opposed by one gentleman on the ground of the bees being a source of danger in carrying infection; and no one present contradicted him. She says he is an enthusiastic bee-keeper himself, which makes his point more difficult to understand. I have introduced the subject of bee-keeping into two schools, and lately been lecturing on it to mistresses of various schools, with the intention of urging it as desirable from a Nature-study point of view, and, therefore, should be glad to have the question settled by other authority than my own. I send name, and sign—C. D. M., Croydon.

REPLY.—There is no analogy between bees and mosquitoes, or even between bees and flies, which latter are said by some persons to carry infection. In the case of mosquitoes, the insect actually makes a

wound for the purpose of drawing blood, and in this way may readily carry infection. The fly also settles on human beings continually, so that it might carry germs in that way. But the bee only visits flowers, and never alights on a person except to use its sting when interfered with, and, even then, does not inject a dangerous poison.

[3557.] *Fermented Honey for Bee-Food.*—I send you a small sample of run honey (extracted in September, 1903) that has evidently fermented and worked under the metal caps. As I cannot understand this, I ask: 1. Can you, after examination, kindly let me know the cause of fermentation? I may say it was not extracted until well on in September, 1903, from well-capped combs, and not artificially ripened, as it set hard in the jars in a few days after bottling. I believe it was bottled same day as extracted, and I should be sure to leave the tops off for a time to let the air-bubbles escape, if such had been formed by running the honey into the jars. 2. Do you consider it fit for home use or in making candy, or any syrup food, for the bees? There are about eight jars in all.—W. G., Rostrick, September 5.

Reply.—1. Sample, though same in colour as granulated honey, is as thin and liquid almost as sugar syrup for bee-feeding. It has evidently fermented badly, being as thin as unripe honey, and getting sour in flavour. The only use of it we should advise is to make syrup-food in spring. It would not do at all well for wintering bees on, as being likely to cause dysentery.

[3558.] *Bee-keeping in India.*—Being about to try bee-keeping in India, I have been advised to write to you by a subscriber to ask whether in your opinion the size of the cell-markings in comb-foundation will seriously affect the filling of sections. The bees used out there are, I think, smaller than those in England, and are kept by the natives in earthen water-pots. Do you know of bees being kept in India, and of any book on the subject? Your reply will oblige.—H. J. East, Sompting, September 1.

Reply.—The smaller bee you mention is *Apis Indica*, which builds a smaller cell than our English bee, there being about thirty-six cells of the former to twenty-nine of the latter to the square inch, but several of the European varieties have been introduced, and comb-foundation of same sized cell as used here can be obtained in some parts of the country. No trouble need, therefore, be expected on that score. The only book on bee-keeping in India is that by Mr. J. C. Douglas, "A Handbook of Bee-keeping for India," published in Calcutta.

[3559.] *Handling Live Bees.*—I herewith enclose you a Press cutting headed "Daring Performance by a Bee Expert," who took up live bees in handfuls. I happened to go to the Lancaster Show, which was held on August 13 last. There was a bee demonstration on the show-ground, when a little boy of seven years of age did the same thing. Seeing this, I resolved to start bee-keeping, and now ask: Would it be possible for me to do the same without being protected in any way? A reply in B.B.J. will greatly oblige. — D. Precious, Lancaster, September 9.

Reply.—There is nothing uncommon in being able to handle bees without being stung as stated, as any practical bee-keeper of experience knows well. The "daring" character of the "performance" is in the reporter's view of it.

[3560.] "*Swarthmore*" *Cell-Cups.*—Having had great difficulty in transferring larvæ into queen-cups for queen-breeding (I have only had one accepted this summer), I should be greatly obliged if you would give me a fuller explanation *re* "Pratt" or "Swarthmore" method mentioned in B.B.J. of September 17, page 378. It says a special die is needed for these inner shells. What size and shape of die is needed, and to what depth do you dip the die in the wax, and how many times? I only want a few queen cells, but I want to learn the latest method of queen-rearing. I send name, etc., for reference, and sign — An English Bee-Keeper Located in Russia.

Reply.—In the following issue of the B.B.J., viz., September 24 (page 386), there appears an illustration of the die (or "cell compressor") which shows its construction. In our issue of May 19 this year (page 199) are illustrations of the "Swarthmore" plan as practised in England.

[3561.] *Recognising Foul Brood.*—I should be greatly obliged if you would tell me how to detect foul brood in the bacillus stage in combs. It seems clear that if one can do this one can keep the disease at bay, whereas if it develops into the spore stage it is almost hopeless to do so. Judging from the enlarged photo-micrograph in Mr. Cowan's "Guide Book," it appears to me to be almost impossible to recognise the disease in its earliest stages with the naked eye.—Arthur H. Wilkes, Four Oaks, September 12.

Reply. — By referring to page 146 of "Guide Bock," and carefully reading the description of foul brood as it affects the larvæ when first attacked by the bacilli, there will be no difficulty in recognising the disease in its earliest stages, as it is most minutely described therein.

[3562.] *Leaving Sections on Hives for Winter.*—As the surplus honey gathered by my bees this year is very dark in colour, I should like the bees to keep it for their support during the coming winter. This being so, will you kindly say if it would be best to let the sections remain as they are on top of brood-frames for the winter? I may say some of the brood-frames have very little food in them.—DAVID JOHNSON, Long Ditton, Surrey, September 12.

REPLY.—You had better make an effort to get the bees to carry the honey down into brood-nest below. To do this remove the cappings, or bruise the sealed surface by scraping with the edge of a knife, and reduce the coverings of sections to a single quilt, in order to cool the rack and induce bees to cluster below at nights. If, as is sometimes the case, the bees refuse to carry the food down, leave the rack on for winter.

Bee Shows to Come.

September 15, 16, and 17, at Crystal Palace.—Surrey Bee-keepers' Association Annual Exhibition of Bees, Honey, Wax and Appliances, &c. **Entries closed.**

September 17 to 24, at the Agricultural Hall, London.—Honey Show in connection with the twelfth Annual Exhibition and Market of the Grocery and Kindred Trades. Numerous classes and liberal prizes for comb and extracted honey and beeswax. **Open to all British Bee-keepers.** Schedules from H. S. Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad-street, London, E.C.

Special Notice.—In connection with above Show there will be a *Working Exhibit* illustrative of modern Bee-keeping and Honey-production, including *Demonstrations* with *Live Bees* and extracting honey from combs for sale by skilled experts. (See large advt. p. v.)

October 4 to 7, at the Agricultural Hall, London.—Show of Honey and Bee-produce in connection with the British Dairy Farmers' Association. **Entries closed**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

*** Mr. S. J. Baldwin, Bromley, Kent, the well-known veteran expert of the B.B.K.A., requests us to notify his departure on a visit to America by the ss. "Lucania" on the 8th prox., and that he will be pleased to undertake any friendly or business commission that may be entrusted to him. His address in America will be 44, Trinity-street, Newton, N.J., U.S.A.

Shropshire B.K.A. Show.—Owing to a printer's error we must explain that the names of Messrs. J. Carver, J. W. Astbury, and F. W. Norris appeared in the list of awards by mistake, those gentlemen not being exhibitors this year. In Cottagers' Class, "J. S. Simpson" should read J. Stanton, and for Beeswax "W. Powell" should be W. Patchett.

A. J. R. (Sussex).—Foul Brood Legislation.—The second letter received is, if anything, more unsuitable for publication than that referred to on page 339, notwithstanding the assertion that we are "suppressing discussion," and doing an injustice to "a reader of 20 years' standing" by refusing its insertion. However, in order to show how far our refusal is justified, we print a brief par. from the long letter before us. Our correspondent says: — "It would be far from giving our case away to have a tax of 7s. 6d. per hive, at which our Government would no doubt bite." Again, he adds:—"I do not expect the 7s. 6d. licence to come off; but that is the only safe and sure idea of annihilating foul brood."

A. F. D. (Canley).—Beginning Bee-keeping.—We cannot judge the condition of your hive from the bit of comb sent. The latter is old, black, and the cells quite empty. If the stock was—as stated—strong when purchased in spring, the failure of the bees to enter supers or store honey below must have arisen from the poor honey season in your district. To make a success of bee-keeping, it is needful to acquire an insight into the "why and wherefore" of many things that are sure to happen, among them the reasons why bees do not always fill sections though put at the right date, and for this reason a good book on bee-management is indispensable to all beginners, as containing full details with regard to supering and feeding for winter.

G. L. (Weybridge). — 1. The remains of comb left in section indicate its having been eaten away by the bees; it appears like built-out comb of last year, which for some reason the bees did not take to. Had the season been fairly good, it is probable that the comb given would have been refilled; but instead the bees have torn it down for lack of better occupation. 2. It is, of course, possible that some of your hives have swarmed unseen, and the bees been lost, as suspected, and this would in some measure account for

the failure in honey storing. 3. Good and reliable swarm-catchers are few and far between, we find.

NOVICE (Sheffield).— Bee Books.—1. The only pamphlet on the "Wells System" we know of is that published by the author, Mr. Geo. Wells, Eccles, Aylesford, Kent. 2. No pamphlet on preparing honey for sale has been published. 3. We never before heard of bees "gathering up grains of sand for carrying off with them." 4. A large swarm from a supered hive on the heather at the end of August is very late indeed.

BEGINNER (Dorset). — Granulating Honey in Shallow-Frames.—You can only remove the liquid portion of honey with the extractor without destroying the combs.

Honey Samples.

J. T. H. (Saltash).—Honey is of very good quality. Save for being rather wanting in consistency, it would be excellent. The sample of sugar sent (yellow crystals) will be all right for bee-food if guaranteed pure cane, but not so suitable for autumn feeding as refined white crystals, because the latter is freed from the molasses (or treacle) in the process of refining, and is thus more wholesome for bees in winter when there are few opportunities for a cleansing flight.

M. K. (Kidderminster). — Of the three samples received, No. 1 is a bit thin, but otherwise a good honey. No. 2 (medium in colour) is also thin and coarse — or rank—in flavour; it is of poor quality for table use. No. 3 is much like No. 1, but has been deteriorated with honey dew.

A. GOLDING (Berks).—The quality of honey sent is quite spoilt for table use by a liberal admixture of honey dew. This also accounts for its dark colour. There are no means of improving its colour, as you suppose.

Suspected Combs.

G. B. (King's Norton).—The two very tiny bits of comb sent are unsuitable for diagnosing correctly. There are no visible signs of disease in contents of the two or three cells; but to form an accurate opinion we should have comb containing young unsealed larvæ. Failing this we should advise you to keep a sharp eye when examining combs of brood in spring of 1905.

A READER (Newport, Mon.).—1. Bad case of foul brood. 2. Since bees are strong and have already been put on clean drawn-out combs you had better continue using the preventive named, and watch the brood carefully next spring to see if it hatches out all right.

WINTONIAN (Bournemouth). — Comb contains foul brood, evidently not of long standing, if all combs are like sample.

LILAC (Derbyshire). — There are slight signs of foul brood in comb; the disease is in the incipient stage. Your proposed plan of dealing with the case is right at this season.

C. F. O. (Hants).—We find no disease in comb sent.

L. J. B. (Barnet).—Of the four samples sent, No. 1 (nearly new comb and only once bred in) shows very slight signs of disease. In No. 2 there is no foul brood. No. 3 is very old comb, and affected with foul brood of old standing. This is most likely where the disease comes from in other samples.

**** Several Letters and Queries are unavoidably held over till next week for lack of space*

Special Prepaid Advertisements.

Twelve words and under; Sixpence; for every additional Three words or under, One Penny

Advertisements for current issue must be received by first post on Tuesday.

WANTED, early edition of COWAN'S GUIDE BOOK (Fourth, Eleventh, and Thirteenth editions) Full price paid for soiled copies of above if text is complete. Address, "BOOKS," *Bee Journal* Office. D 59

FOR SALE—SEVEN STOCKS BEES in frame-hives (eight frames each), with sections, crates, etc. What offers? Can be sold separately. Miss E. BEST, Abbottsann, Andover, D 45

DRIVEN BEES. Strong lots, with Queen, 3s. 6d. per lot. Boxes returnable. MILLWARD, Chaddesley, Kidderminster. D 50

MESSRS. STONE & SONS, CHEMISTS, EXETER, are BUYERS of English BEESWAX, in large or small quantities. Write, stating quantity and price required. D 62

LOVELY SILVER CAMPINE COCKERELS. 4s. 6d., or exchange anything in Bee line. LITMAN, Castle Cary, Som. D 56

IMPORTED ITALIAN QUEENS, 5s. 6d. British, 3s. 4s. each. All in introducing cages, free. E. WOODHAM, Clavering, Newport, Essex. D 49

FOR SALE—EXTRACTED HONEY, in 30lbs. tins and 1lb. screw-cap jars. Prize Honey, sample 2d. H. J. WISBEY, Whittlesford Mill, Cambs. D 52

HEALTHY DRIVEN BEES, 1s. 3d. per lb.; grand young Heather Queens, 2s. 6d. THOMAS HOOD, Pickering, Yorkshire. D 55

QUANTITY of SECTIONS (some Heather); also Extracted in bulk or bottle; samples and prices free. KENT, Fordington, Dorchester. D 53

FOR SALE, GEARED EXTRACTORS; "Cowan," 50s., "Lee's," 33s. 6d. Guaranteed perfect condition; latter only used once. What offers? WARD, Wesleyan School, Dartford. D 46

NEW light-coloured RUN HONEY about six and a-half cwt. at 45s. cwt. to clear; 109 Sections, 7s. per doz. KER, Harlow, Essex. D 47

HEALTHY DRIVEN BEES, 1s. 3d. lb. in 4-lb. lots; young Queens, 1s. 6d.; boxes returnable (15th season). R. BROWN, Flora Apiary, Somersham, Hunts. D 57

PRINTING.—100 Private Cards, 1s. 6d.; 100 Billheads, 1s. 6d.; 100 Printed Note, 1s. 6d. HOLMES, 2, Seymour Street, Plymouth. D 48

HONEY, in 1-lb. Sections, Wanted, price per cwt., carriage paid to G. GALLIFORD, Sunnydale. D 60

DRIVEN BEES, guaranteed healthy, 1s. lb., packing free. A. ELKINS, Netheravon, Salisbury. D 58

Editorial, Notices, &c.

THE GROCERS' AND KINDRED TRADES' EXHIBITION.

HONEY SHOW AT THE AGRICULTURAL HALL.

The Twelfth Annual International Exhibition and Market of the Grocery and Allied Trades at the Royal Agricultural Hall, London, opened on the 17th inst., and will be continued till Saturday next, the 24th. The exhibition as a whole is a remarkably fine one, no doubt equalling any of its predecessors. But of the bee and honey section it expresses the general feeling of all to say that with so many attractions for bee-keepers in the shape of liberal prizes and a quite unique exhibition illustrative of modern bee-keeping in all its varied phases, it was disappointing to find the entries somewhat less than those at the similar exhibition held last year. Of course there have been adverse conditions to contend with, and these reduced the number of exhibits. Apart from the entries the show was a good one in all respects, as will be seen by the many awards made beyond the prizes offered. It is also gratifying to record a complete success for the new feature of a working exhibit of modern bee-keeping introduced at the recent Confectioners' Exhibition, and continued this week. Large, and evidently interested, audiences attended at each demonstration, and a good trade was done in disposing of honey extracted from the combs in presence of the onlookers. In fact, Messrs. Herrod and Stewart scored a distinct success.

Mr. W. Broughton Carr, London, and Mr. Ernest Walker, Woking, Surrey, officiated as judges, and made the following awards:—

Display of Honey (comb and extracted) and Honey Products, shown in suitably attractive form for a tradesman's window (6 entries).—1st and Silver Medal B.B.K.A., F. W. Woodley, Camp Stores, Compton, Newbury; 2nd, T. Marshall, Sutton-on-Trent; 3rd, C. W. Dyer, Compton, Newbury; 4th, J. Pearman, Penny Long Lane, Derby.

Twelve 1-lb. Sections (13 entries).—1st and Bronze Medal B.B.K.A., F. W. Woodley; 2nd, T. Marshall; 3rd, C. W. Dyer; 4th, A. E. Young, 34, East Street, Chatham; v.h.c., T. G. Hillier, Andover, Hants; v.h.c., E. C. R. White, Newton Toney, Salisbury.

Twelve 1-lb. Heather Sections (6 entries).—1st, J. Waddell, Alwinton, Northumberland; 2nd, J. M. Balmbra, East Parade, Alnwick; 3rd, H. Waddington, Boroughbridge, Yorks.

Three Shallow Frames Comb Honey for Extracting (6 entries).—1st, J. Waddell; 2nd, A. E. Young; 3rd, F. W. Woodley; 4th, T. Marshall.

Twelve 1-lb. Jars Light-coloured Extracted Honey (20 entries).—1st, J. Boyes, Cardiff; 2nd, J. Jones, Wegber Quarry, Carnforth, Lancashire; 3rd, J. Pearman; 4th, J. Waddell; v.h.c., Messrs. Lee and Son; v.h.c., W. Patchett, Cabourne, Caistor, Lincs; v.h.c., T. G. Hillier; h.c., C. W. Dyer; h.c., W. J. Longley, Basingstoke, Hants; h.c., W. J. Cook, Binbrook, Market Rasen.

Twelve 1-lb. Jars Medium-coloured Extracted Honey (20 entries).—1st, C. W. Dyer; 2nd, G. Hills, Comberton, Cambridge; 3rd, J. M. Best, Trewoon Apiary, St. Austell, Cornwall; 4th, J. Waddell; c., F. W. Woodley.

Twelve 1-lb. Jars Dark-coloured Extracted Honey (10 entries).—1st, G. Hills; 2nd, J. Waddell; 3rd, J. Clay, Wellington, Salop.

Twelve 1-lb. Jars Heather Honey (8 entries).—1st, W. Dixon, Beckett Street, Leeds; 2nd, J. Berry, Llanrwst, N. Wales; 3rd, W. Sproston, Shugboro, Great Harwood, Staffs; 4th, E. C. R. White

Twelve 1-lb. Jars Granulated Honey (6 entries).—1st, F. W. Woodley; 2nd, T. Marshall; 3rd, R. Godson, Tothill, Alford, Lincs; 4th, E. C. R. White.

Beeswax in Cakes, Quality of Wax, Form of Cakes and Packages suitable for retail counter trade (13 entries).—1st, Mrs. A. Harris, Sibsey, Boston, Lincs; 2nd, F. W. Woodley; 3rd, Messrs. Lee and Son; 4th, G. W. Kirby, Knowle, Bristol; v.h.c., J. Boyes; c., E. Robb, Outwell, Wisbech, Cambs.

Beeswax judged for Quality of Wax only (11 entries).—1st, J. Waddell; 2nd, Miss H. Ratcliffe, Barthomley, near Crewe; 3rd, A. G. Preen, Nesscliffe, Shrewsbury; 4th, Messrs. Lee and Son; v.h.c., F. W. Woodley; h.c., E. E. Scholefield, Chudleigh, S. Devon; h.c., E. Robb; c., J. Clay.

(No entries for sections or extracted honey in selling classes.)

DERBYSHIRE B.K.A.

ANNUAL SHOW.

The twenty-third annual show of bees, honey, etc., of the Derbyshire Bee-keepers' Association was held in the Cattle Market, Derby, in connection with the Derbyshire Agricultural Society's annual County Show on September 14 and 15.

Demonstrations in the bee tent were given on the second day by Mr. J. Rowland, assisted by Mr. R. H. Coltman, and attracted considerable crowds. Unfortunately, owing, no doubt, to the bad honey season, the number of exhibits fell short of last year's total (in itself a bad year) by over 25 per cent. Practically all the ex-

hibits entered were staged, and, considering the season, the quality was very fair. Mr. J. Pearman again won the Challenge Cup for the best display of honey. The arrangement of the show was carried out by the hon. secretary, and Mr. J. Rowland officiated as steward.

The duties of judge in the bee section were undertaken by Mr. P. Scattergood, Stapleford, Notts, and the following were the awards:—

MEMBERS' CLASSES.

Observatory Hive (single frame) with Bees and Queen.—1st (15s.), T. Richards, Church Gresley; 2nd (10s.), A. H. Dawson, Burton-on-Trent; 3rd (5s.), C. Spencer, Ashley-hay.

Observatory Hive with Bees and Queen.—1st (15s.), J. L. Martin, Crewton; 2nd (10s.) C. Spencer; 3rd (5s.), S. Durose, Burton.

Trophy of Honey in any Form.—1st (challenge cup and 10s.), J. Pearman, Derby; 2nd (7s. 6d. and silver medal D.B.K.A.), S. Durose; 3rd (7s. 6d. and bronze medal D.B.K.A.), C. Spencer; 4th (7s. 6d. and certificate), H. Brayshaw, Derby.

Twelve 1-lb. Sections.—1st (10s. 6d. or silver medal D.B.K.A.), J. Pearman; 2nd (7s. 6d.), J. Stone, Cubley; 3rd (5s.), T. Richards.

Twelve 1-lb. Jars Light Extracted Honey.—1st (10s. 6d. or silver medal D.B.K.A.), S. Durose; 2nd (7s. 6d.), J. Pearman; 3rd (5s.), J. Stone.

Twelve 1-lb. Jars Dark Extracted Honey.—1st (10s. 6d. or silver medal D.B.K.A.), not awarded; 2nd (7s. 6d.), S. Durose; 3rd (5s.), T. Richards; 4th, H. Hill, Ockbrook.

Six 1-lb. Sections.—1st, not awarded; 2nd (5s.), T. Sleight, Pilsby, Chesterfield; 3rd (2s. 6d.), G. Allen, Chellaston.

Six 1-lb. Jars Extracted Honey.—1st (7s. 6d.), T. Sleight; 2nd (not awarded); 3rd (2s. 6d.), J. E. Amatt, Lea Wood.

Six 1-lb. Jars Granulated Honey.—1st (7s. 6d.), J. Stone; 2nd (5s.), S. Durose; 3rd not awarded.

Six 1-lb. Jars Heather Honey (county only).—1st not awarded; 2nd (5s.), T. Sleight; 3rd not awarded.

Beeswax.—1st (7s. 6d.), J. Pearman; 2nd (5s.), J. Stone; 3rd, (2s. 6d.), H. Hill.

OPEN CLASSES.

Twelve 1-lb. Sections.—1st (5s. and silver medal D.B.K.A. or 15s. 6d.), W. Patchett, Cabourne; 2nd (10s.), G. Hills, Comberton and George Jeffries, Andover (equal).

Twelve 1-lb Jars Extracted Honey.—1st (5s. and silver medal D.B.K.A., or 15s. 6d.), T. S. Holdsworth, Kirton Lindsay; 2nd (10s.), S. Durose; 3rd (5s.), W. Patchett.

Single 1-lb. Jar Extracted Honey (entry free).—1st (4s.), T. S. Holdsworth; 2nd (3s), W. J. Cook, Market Rasen; 3rd (2s.), T. Sleight.

Single 1-lb. Section.—1st (4s.), A. W. Weatherhogg, Willoughton; 2nd (3s.), W. Patchett; 3rd (2s.), W. J. Cook.

Collection of Appliances.—1st (£2), E. H. Taylor, Welwyn, Herts; 2nd (£1), H. Brayshaw.—R. H. COLTMAN, Hon. Sec.

HONEY SHOW AT KNUTSFORD.

The honey classes at the annual show of the Mid-Cheshire Farmers' Association, which was held on September 3, were increased in number this year, and received a fair amount of support. Some of the exhibits were of very good quality, and, with one exception, dark-coloured samples were absent. Mr. E. G. Parker, Altrincham, and the Rev E. Charley, Ince Vicarage, Chester, officiated as judges, and made the following awards:—

OPEN TO CHESHIRE.

Six 1-lb. Jars Extracted Honey.—1st, J. Penilott, Ashley; 2nd, H. Potts, Dutton; 3rd, G. Lambert, Comberbach, and F. Wilkinson, Dutton (equal).

LOCAL CLASSES.

Six 1-lb. Jars Extracted Honey.—1st, G. Lambert; 2nd, J. Harrop, Lower Peover; 3rd, F. Bate, Knutsford.

Six 1-lb. Sections.—1st, S. Jennings, Over Tabley; 2nd, Miss H. B. C. Carver, Knutsford; 3rd, F. Bate.

Beeswax.—1st, J. Hazlehurst, Plumbley, and G. Lambert (equal); 2nd, H. C. J. Harrop; 3rd, C. F. Bate.

COTTAGERS' CLASSES.

Three 1-lb. Jars Extracted Honey.—1st, J. Hazlehurst; 2nd, G. Lambert.

Three 1-lb. Sections.—1st, J. Harrop.—(*Communicated.*)

MID-LOTHIAN B.K.A.

HONEY SHOW AT EDINBURGH.

The annual exhibition of the Mid-Lothian Beekeepers' Association was held in the Waverley Market on September 14 in connection with that of the Royal Caledonian Horticultural Society. The entries were very good considering the season. The following is the prize list:—

MEMBERS' CLASSES.

Display of Honey (not exceeding 50 lb.).—1st, C. N. Craik, Dalkeith; 2nd, J. Strathearn, Newlandrigg.

Six 1-lb. Sections.—1st, D. Young, Roslin; 2nd, C. N. Craik; 3rd, George Smith, Oxenford Castle.

Six 1-lb. Jars Extracted Honey.—1st, William Weir, Heriot; 2nd, C. N. Craik; 3rd, George Smith.

Six 1-*lb. Heather Sections.*—1st, George Bennet, Gorebridge; 2nd, C. N. Craik; 3rd, J. Strathearn.

Six 1-*lb. Jars Heather Honey.*—1st, William Weir; 2nd, Robert Torrance, Currie.

Three 2-*lb. Sections.*—1st, D. Young, Roslin.

Super of Honey (*under* 10 *lb.*).—1st, William Weir.

Non-Sectional Super.—1st, L. Bell, Roslin; 2nd, D. Young.

Non-Sectional Super Heather Honey.—1st, Richard Torrance, Currie; 2nd, C. N. Craik; 3, Robert Torrance.

Straw Cap of Honey.—Leonard Bell, Roslin.

Beeswax.—1st, Leonard Bell; 2nd R. Torrance.

OPEN CLASSES.

Six 1-*lb. Sections.*—1st, John Clark, Carnwath; 2nd, S. Roebuck, Dumfries; 3rd, W. J. Cook, Binbrook.

Six 1-*lb. Heather Sections.*—1st, John Clark; 2nd, A. Macdonald, Glenurquhart; 3rd, J. Strathearn.

Six 1-*lb. Jars Extracted Honey.*—1st, John Clark; 2nd, W. J. Cook; 3rd, S. Roebuck.

Six 1-*lb. Jars Heather Honey.*—1st, John Clark, Carnwath.

Non-Sectional Super Honey.—1st, J. Clark; 2nd and 3rd, S. Roebuck.

Non-Sectional Super Heather Honey.—1st, John Clark.

Single 1-*lb. Sections.*—1st, W. J. Cook; 2nd, James Bell.

SWEEPSTAKE CLASSES.

Three 1-*lb. Sections.*—1st, W. J. Cook.

Three 1-*lb. Heather Sections.*—1st, James Bell.

Three 1-*lb. Jars Extracted Honey.*—W. J. Cook (special prize).

Two 1-*lb. Sections.*—1st and 2nd, W. Weir; 3rd, A. Denholm.—(*Communicated.*)

CONWAY HONEY FAIR.

For many centuries past, the month of September has witnessed the above institution, the small farmers and cottagers from the beautiful vale of Conway, and the uplands adjoining, bringing the produce of their hives for sale. Not so many years ago, the honey was brought to the fair in cans, and sold by the quart, the vendors standing on the cobble-stoned pavements along High Street. No attempt was made in those days to produce honey of a distinct grade, but modern views now prevail, and honey is put up in neat glass jars. The Corporation of the ancient borough having decided to revivify the old fair, a competition was arranged and prizes offered for the best honey and wax in seven classes, three of them being open to all comers. The competition was a remarkably good one, all the honey staged being of very good quality, the light-coloured and the heather honey being of the very finest.

The exhibits were staged in the Market Hall, Mr. T. W. Jones, of Etwall, Derby, being appointed judge; the Mayor and the Market Committee acting as stewards. The honey was afterwards offered for sale along High Street, and about 700 lb. sold at 1s. 6d. per lb. jar, the demand far exceeding the supply. On the awards being completed, the Mayor (Mr. A. J. Oldham, J.P.) proposed a vote of thanks to the judge, and expressed the hope that the bee-keepers of the neighbourhood would realise a good price for their exhibits, and promised that the Corporation would do all they could to make the fair a success, and hoped they would come in even greater numbers next year. The day, September 13, was beautifully fine, and the town was crowded with visitors.—(*Communicated.*)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "*THE EDITORS of the *'British Bee Journal,' 10, Buckingham-street, Strand, London, W.C." All business communications relating to advertisements, &c., must be addressed to "*THE MANAGER, *'British Bee Journal' Office, 10, Buckingham-street, Strand, London, W.C."*

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[5637.] The "talks" among bee-men when visiting bee and honey shows is one of the best methods of disseminating knowledge. If there happens to be any point not made quite plain to a bee-keeper a simple question and answer will often elucidate the matter under discussion and convey the meaning intended just when the mind and memory of the questioner is in a receptive mood, and consequently the idea is retained. We had a talk on handling comb-honey in sections, and notwithstanding the many hints that have been given in past numbers of the B.B.J. and *Record* on "how to pack honey for safe transit by road or rail," there are still instances of comb-honey being so carelessly packed that the entire contents of large cases reached the purchaser in such condition as to be made fit for sale only as extracted honey. Gross carelessness like this is disappointing to both producer and

purchaser. After a purchaser has given his order he takes orders himself for the goods expected, and we can imagine his feelings when, on arrival, he finds the bulk of his purchase unfit for delivery! Sections travel best if glazed first, but where wanted unglazed they should be tied in parcels of six or twelve with a square of thin wood cut the size of the section or an oblong piece to cover two sections side by side. Then in preparing the travelling box a thick layer of soft straw or hay must be put at bottom of box next the parcels of honey, with hay packed all round; also a sheet of paper laid on the parcels; then another wad of hay, quite an inch thick, when pressed down. Now add more parcels and packing as before till the box is full. All packing cases must have half-inch holes made in the ends, through which strong cord is put to form handles, so that porters and carmen may have something by which to lift cases. I should not advise any single case to weigh above 1 cwt. Then to finish the job, use a good bold label with words: "Don't jar! Honey-comb. This side up," pasted on the lid. I send cases of honey to the North of England and also to Scotland every year, yet rarely get any complaint of even a cracked glass. I sent off a four-gross parcel last year, and the firm wrote to say it was the best packed parcel they had ever received. This season they have ordered a double quantity.

The Work of Experts.—If Bee-keepers' Associations would start on an entirely new method of dealing with so-called "cantankerous members" of our fraternity I think something tangible might be done in dealing with foul brood. I would recommend that each association's expert receive a salary sufficient to support him and give his whole time to his work, and his principal occupation should be the production of bees all through the spring and summer months. These bees should, where practicable, be on frames, but I would also have a proportion of swarms put into skeps. This done, when our expert on his tour hears of men who are so obstinate or stubborn in refusing to do anything to their bees themselves or allowing anyone else to do it for them, I say meet them with the offer of a new colony for their old ones. If this was done, depend on it the offer would be accepted, and the expert would be allowed to do any disinfecting of stands, etc., that he wished. I would also try and persuade every bee-keeper who still clings to skeps to use new hives, and if he is in indigent circumstances the associations might supply same at half cost price. If something on these lines was done I believe our county B.K.A.s would be better supported than now, not only by individuals, but also by County Councils. There may be difficulties in the way of such a scheme, but it seems to me that any system which will help to build up the industry is better than the destruction by fire with no compensation.

In writing on this subject, I may have given offence to some "experts." But where foul brood is known to be so infectious, it behoves us to take every precaution we can.—W. Woodley, Beedon, Newbury.

BEE-KEEPING IN N.W. HERTS.

SOME NOTES ON THE SEASON.

[5638.] The bees in my apiary have done so well this season that I thought your readers might be interested to know results. Reckoning on the basis of my last year's "take," I hoped to take off 500 sections this season, and my actual result was 490 sections from seven hives, besides an increase of five stocks. To these I have also to add about 150 sections with comb, all built out ready to go on next season. My bees did a good deal of swarming, but the swarms were returned to the hives they came from. I obtained prizes for honey at Brent Pelham, Buntingford, and Bishop's Stortford, but I have not yet got my exhibits up to the standard I should like them to be. I always read Mr. Woodley's "Notes by the Way" with interest, hoping that he will enlighten us bee-keepers some day as to the secret of obtaining prize sections, or as to the respective merits of 4, 2, or no bee-way sections. I am sorry for the Essex bee-keeper whose report was in last week's issue. His district must be an unfavourable one, or else his management is not quite right. I give my bees plenty of syrup. I am now continually invading my cook's domains to make syrup for my bees, and all my hives now have bees carrying in pollen. When wintering, I put a couple of sticks across frames to give bee-space under coverings, and pack up warmly, and I have never yet lost a stock. In spring I uncap honey-cells besides giving the bees syrup. I got my first swarm on May 16.

Price of Honey.—Could you give your readers some idea of the price good sections ought to fetch? I have been offered a price by one of your advertisers, which I consider much too low, considering the price they are retailed at in the West-end of London, and I have not failed in selling at my own price. [We cannot fix prices.—Eds.]

Expert Examinations.—Could not a list of dates and places of examinations be given? I think this would be useful to intending candidates, and perhaps remind bee-keepers of these examinations, which I think would prove useful to others besides those who intend to be lecturers or experts.

In Herts we have no County B.K.A., and as a result the County Council has not felt it a part of its work to promote this profitable and interesting industry, as it does little or nothing in this direction. There is a large market in London for honey, and people in Herts have a great advantage in being so near town. I have sent safely large quantities this season at owner's risk, and could sell a lot more if I had it. Will not some enthusiastic bee-keeper in the central part of the county take up the matter, call a meeting at Watford, Hertford, or St. Albans and see if a County Association could not be started?—H. NEWMAN, Hon. Sec. Bishop's Stortford and District B.K.A.

QUEEN BEES AND BRAULA CŒCA.

DOES THE PARASITE PREVENT LAYING?

[5639.] I send you particulars of a little experience I had a week or two ago with the Braula cœca or blind louse, as it may be of use and interest to your readers. On examining one of my hives—a strong stock of Italian hybrids—I could not find a trace of brood or eggs in the combs, and almost came to the conclusion that the stock was queenless, but on looking over the frames again later on I discovered the queen (a very young one) literally covered with Braula cœca or blind louse. It was pitiable to see the poor queen trying to rid herself of the parasites, so I caught her, and after placing her in a matchbox I took her indoors. I then made preparations for removing the lice by using tobacco smoke, and let her loose on the table. After a few puffs of smoke the lice dropped off and left her perfectly free and clean. This done, I returned the queen to her hive, and on looking a week after I found some fine patches of eggs in different stages, so that I think she must have been so worried by the parasites that she stopped laying, at any rate it seemed so by the rapidity with which eggs are appearing now.—A. WAKERELL, Croydon, September 14.

THE HONEY SEASON IN CORNWALL.

[5640.] The honey in this district is this year composed of a blend of blackberry and clover, some combs have about equal parts of each mixed together, while the others are mainly clover. I watched the bees carefully during the honey flow, and observed them working about equally on the bramble and clover. No honeydew was gathered here. The blackberry honey is dark in colour, but of good flavour, and my plan in extracting was to put in a comb filled partly with the last-named bramble honey, and I balance it with one containing mainly clover honey, and the result is a blend of good colour and beautiful flavour, my customers being highly satisfied with same, as I am myself. I got one shallow-frame box filled with tree blossom honey early in the season. It was dark in colour, but of good flavour. It was gathered from many sources—apple, sycamore, holly, rhododendron, hawthorn, etc. I am at a loss to understand why some have a prejudice against dark honey, for it is certain that such may be very good indeed, if free from honeydew. I think bee-keepers should do their best to remove such foolish prejudice about colour. The bees here did not gather at all from the limes this season; I rarely saw a bee on the same. I have all through the season taken particular notice of the plants, etc., visited by bees, and observed them working on many wild flowers that I was previously unaware that they gathered from. It seems to me probable that many bee-keepers throughout the country are this year mistaking the admixture of blackberry honey for honeydew. I am positive that my bees stored no honeydew, as there was none to store that I could see.—W. J. FARMER, Truro, September 18.

[We congratulate our correspondent on his freedom from honeydew, and wish we could endorse his view with regard to that annoying and costly source of trouble to bee-keepers this year. Unfortunately, however, we are not apt to be mistaken in the matter, and the almost invariable cause of the dark honey complained of in the scores of samples sent to this office has been honeydew pure and simple.—EDS.]

THE TROUBLES OF BEE-KEEPING.

[5641.] I am sorry to say I have to be continually using naphthaline and naphthol beta in order to keep down foul brood in my apiary; and if I cannot keep my hives clear of it am afraid I shall have to give up bee-keeping altogether, as I cannot get either pleasure or profit out of it, beyond the pleasure of making up a few hives in winter. I started four years ago and lost £20 first start, and since that time I have spent at least another £20, to say nothing of the amount of time put into it. I consider this rather a large sum for a working man to drop over a hobby. Not only so, but I think everyone ought to make their hobbies pay, and I am sure I could do this with bees, if only able to keep clear of foul-brood. Nor is it for the want of care in looking after my bees that the trouble comes. Indeed, when the expert gave me a look up during his spring tour this year, he said my apiary "was in splendid condition," and that it was quite a treat to handle such a good lot of stocks as mine. But when I took him round and showed

him some hives near to me—at one place we found seven pieces of comb, nearly the size of a standard frame, rotten with foul brood lying about in the open garden—I said, "How does that look for my neighbours' bees?" I see a lot of reports on the good side of money-making in the B.B.J. and B.K.R., so I send you a little on the other side. I enclose name, etc., and sign myself—NOVICE, Plymouth, September 13.

P.S.—At the present time the worst of my stocks have about a dozen cells affected with foul brood on one frame, but all the ten frames are crowded with bees and they do not require feeding.

Obituary.

MR. E. DRORY.

We have received the following from Colonel H. J. O. Walker:—

"On the 3rd inst. there died at Berlin, of pleurisy and other infirmities, a good and enthusiastic bee-keeper in the person of Mr. Edward Drory. In everything connected with bees he took an interest. I believe that some years ago he brought back Trigonas from Ceylon, and last winter he returned from Egypt with two colonies of Apis fasciata, now under scientific observation at Oldenburg. Articles on bees from Mr. Drory's pen have appeared in various periodicals, and from time to time he furnished information on bee literature to readers of the B.B.J., who are also indebted to him for the gift of valuable works to the B.B.K.A. library. He had been for many years a collector of bee-books in all languages, of which he possessed probably the most complete collection extant. Though most of his life was spent in Berlin, where he was chief engineer and manager of the Imperial Continental Gas Association, Mr. Drory retained his British nationality. In gratitude for the hospitality his family has received for so many years, he has bequeathed his library to the Berlin University. I never had the pleasure of meeting Mr. Drory, but I know him to have been a thoroughly good-hearted and kindly man, and I think you may like to make mention of him in your journal.—H. J. O. WALKER (Lieut.-Col.), Budleigh Salterton.

In addition to the above, we should like to say that we have known Mr. Drory for a great number of years, and always found him pleasant, obliging, and interesting in all that related to apiculture. Besides contributing to the general bee-literature, in 1873 he founded and edited *Le Rucher du Sud-Ouest*, which title was later changed to *Le Rucher*, and published in Bordeaux. The name of this journal was later on changed to the one it now bears, namely, *Bulletin de la Société d'Apiculture de la Gironde*. In 1877, Mr. E. Drory, in conjunction with T. Sourbé, published *Manuel d'Apiculture Mobiliste*, an 8vo. volume on bee-keeping in movable frame-hives. He introduced *Trigona* bees from South America, but they were not a success. He was also one of the earliest experimenters with Italian bees at his apiary at Bordeaux, and exhibited them in 1873 at the show of the Horticultural Society. Mr. Drory introduced the Egyptian Bee, *Apis fasciata*, into his apiary in 1873, and recognised its irritable and vicious nature, which made it dangerous for ordinary culture. He, however, considered that a cross with the common bee produced an excellent race, and exhibited such at the Horticultural Show in Bordeaux in 1877. We extend our heartfelt sympathy to Mr. Drory's family in their bereavement.

Queries and Replies.

[3563.] *Preparing Stocks for Winter.—Queens Ceasing to Lay.*—Yesterday I took advantage of the lovely weather to examine my bees (four stocks), and am rather disappointed with the result of my investigation. They had done what I thought was satisfactory for this district, inasmuch as they had produced about 100 fairly well filled sections, which I removed about three weeks ago. Since removing surplus honey I have fed the bees lightly at night (to stimulate breeding), and on inspecting the frames recently I hoped to find a good batch of brood, and a sufficient supply of stores for winter. Instead of which I found three or four of the ten frames in each were thickly covered with bees, and the remaining frames not so thickly covered. I saw no brood, however, except a patch about the size of my hand in one hive, of what I took to be brood. This was rather dark-coloured as regards the cappings. I also noticed many cells filled with a reddish or orange-coloured substance which I took to be pollen. As to honey, there were in each hive a heavy comb or two, generally on the outside, but in the centre the combs were light in weight and the greater portion of each was quite dark-coloured. The dark-coloured portion was in most instances filled with what looked like the syrup I have recently supplied, and in every case the upper corners of the combs contained at few inches of sealed honey. Had there been plenty of stores I intended to remove two or three of the outside combs, contract the brood-nest, and, after feeding liberally to end of the month, then to pack up the hives for the winter. Under existing circumstances, however, I propose to leave things as they are in the

hives, and give thicker syrup, as recommended in the "B.B.K. Guide Book," as freely as the bees will take it for a fortnight or so. But I will be glad if you will tell me:—1. Is the course proposed the best I can adopt? 2. Ought I to have found brood in any quantity? 3. Was I correct in supposing the substance to be pollen? The bees appeared to be healthy enough, and I noticed on the frames one or two carrying pollen. I failed to see the queen in any of the hives, but, no doubt, this was owing to my inexperience, and to the fact that I did not like to keep the combs exposed very long, as there was a somewhat cold wind. 4. Is it harmful to the stocks to examine them at this time of the year, or, say, next month? 5. How late in the year can hives be examined without chance of taking harm? Your replies will greatly oblige—W. F. S., Weybridge, September 17.

REPLY.—1. Yes. The sooner the bees are supplied with winter stores the better. 2. To "feed lightly at night" after removal of surplus does not always restart breeding, unless queens are young and very prolific. Under normal conditions queens are fairly well exhausted when the season has closed, and need a rest after the heavy maternal duties of the past six months or so. 3. Quite correct. 4. Not if combs and brood are not exposed to cold winds. 5. Hives may always be opened when bees are flying freely.

[3564.] *Feeding Bees Before Moving Hives.*—I am moving ten stocks of bees a distance of about four miles the first week in October. If I feed them up with thick syrup in their present quarters I shall have all the extra weight of sealed stores to move Therefore I ask:—1. Will it be too late to get them to seal it after I have moved them? I have plenty of drawn-out combs. 2. When worker eggs are deposited in drone-cells do they develop, and if so, are the resultant workers as large as drones?—G. B., September 16.

REPLY.—1. Your best course is to get feeding done as rapidly as possible to give the bees a chance of sealing the food over before cold weather sets in. It is also possible that the bees may not take down the needful amount of stores if feeding is deferred till mid-October. 2. A fertile queen never deposits worker eggs in drone-cells, therefore, the question about "resultant workers" cannot arise.

[3565.] *Stimulative Feeding.—A Lady Beginner's Queries.*—I shall be obliged for a reply to the following in B.B.J. I only began bee-keeping this spring, and so write to ask if my hives are in normal condition for the season, being anxious that they should winter successfully. On looking through the frames in brood-nests two days ago, I found to my surprise that there was no trace of eggs or brood in any of them, I therefore ask:—1. Is it likely that the queens ceased to lay more than three weeks ago, or do you think the hives are queenless? 2. Having begun stimulative feeding now, do you think, supposing that the queens are all right, they will raise any young brood this year? All the hives are very full of bees, which makes it difficult to find the queens, and nearly every comb of all three hives is three-quarters full of sealed honey on both sides, while some of the combs are completely full. I got two racks of sections full of clover honey off each stock during July and the early part of August, after which gathering seemed to cease, and the bees began to kill off the drones, August 12; perhaps I ought to have begun stimulating feeding then, but I left one rack of sections on each hive, hoping bees would fill them from Heather, which was just coming into flower. Owing, however, to bad weather, very little was gathered and no sections sealed over. 3. Do bees gather honey readily after drones have been turned out? In my case there was plenty of bee forage available later on, if the weather had kept fine. But even as it turned out, I should think rapid feeding would be unnecessary in the late autumn, as they have a large supply of sealed stores. I send name for reference and sign—GRIP, Aberdeenshire, September 16.

REPLY,—1. Either of your suggestions is possible; the only practical way, therefore, of deciding the point is carefully and thoroughly to examine each frame. If no queen is found you may assume that the stock is queenless. 2. The probability is that more or less eggs will be laid if the stimulative feeding is properly done by giving warm food slowly, regularly, and continuously. 3. Yes, if bee-forage is plentiful and weather keeps fine; but if stores are plentiful, as stated, no feeding at all is necessary.

[3566.] *Sugars for Bee-food.*—I do not understand how it is that you advertise cane-sugar as suitable for feeding bees, other than "white loaf," as recommended in "Guide Book." I should, therefore, be glad to know if "Demerara crystals" is suitable, as it is neither white or loaf? Also, would you kindly say if bees would live through the winter if fed on it only? I send name and sign—F. C. P., Warminster, September 15.

REPLY.—There is no doubt that either white refined crystals or loaf sugar is, on the whole, best for bee-food; this preference is owing to the fact that white sugars have all the molasses—or treacle—removed in the process of refining, consequently they are better as winter food for bees. On the other hand, the yellow crystals are quite suitable for use in spring,

because the bees then have frequent opportunities of taking a cleansing flight.

[3567.] *Young Queens and Drone Breeding.*—Your advice upon the following would be esteemed:—Two young queens (Italians) recently started laying, and have up to the present time produced many drones in worker-cells, but that these same queens have produced several workers I am also positive; I therefore ask—Do you recommend my keeping these queens, or introducing others? Webster, in his "Book of Bee-keeping," states that "the first eggs laid by young queens in many cases produce only drones, and in exceptional cases quite a number of these are produced." I have never had a similar case before. I thank you in anticipation, and send card for reference and sign—W. F. H., Croydon, September 15.

REPLY.—Our personal experience does not tend to confirm the theory that eggs laid by young queens, if in worker cells, produce drones. Our opinion, therefore, is that the queens in question are drone-breeders through not having been mated.

[3568.] *Bees Refusing to Take Food.*—I have a strong swarm of bees that I got on June 22. They increased wonderfully during summer, but did not gather enough honey to carry them through the winter. I was advised about a month ago to feed them gently with 10 lb. of sugar made into syrup. They have taken it eagerly until just lately. Now, every evening, I find the holes in the feeder sealed up with propolis. Do you think this means that they do not want any more, or shall I continue feeding? —(MISS) M. G., Hythe, Kent, September 16.

REPLY.—The refusal to take food is owing to cold nights and the bees being disinclined to cluster on cold nights at the feed-holes. If there are not sufficient stores for winter in brood-chamber, give the required quantity in a rapid-feeder, and let the syrup be warm when put on. If this is done and the bees induced to enter the feeder they should take down a quart in 24 hours.

[3569.] *Ridding Hives of Braula Cœca.*—1. Would you kindly inform me if the blind louse in a bee-hive can in any way be exterminated? I have noticed so many hives with them this year, and the queens seem much troubled with them. 2. I should also be glad to know if a queen should be laying now, as I have noticed in some hives there is plenty of brood, and even eggs. 3. Is it any use treating a hive now with formalin for foul brood? Unfortunately I have one stock in my apiary affected with the disease, and the same occurred in July, when I turned out the bees and treated for the disease. I have this time cut out the cells infected and requeened the stock. What would you advise under the circumstances?—(MISS) A. A., Berks, September 19.

REPLY.—1. Reference to the letter on page 375 shows that a queen, troubled in the same way, was effectively treated as directed on page 100 of the "Guide Book." 2. Some queens are still laying fairly well, but the majority of hives will be almost broodless, because of the scant supply of late forage now available. 3. We do not advise the use of "formalin" in your case, since the stock has already been well dealt with. The remedy named is troublesome to apply properly, and after removing the affected cells and requeening the stock we should be content with the treatment adopted with the stock in July last, and keeping a watchful eye on the hatching brood next spring.

[3570.] *Using Unsaleable Honey.*—Thank you for former answers to my inquiries in your JOURNAL, in which I am much interested, and from which I have got several very useful hints. I am again in want of your kind information in regard to some very black honey in sections, which is unsaleable, and I think the only use I can put it is for feeding the bees when they require such. 1. In doing this, should I extract it or keep it in the comb for that purpose? Then, if it gets candied, will warming it a little be sufficient, or should it have a little water added? 2. Should the sections be stored in a cool or rather warm place if kept over winter? This is my first experience of anything of the kind.—NOVICE, Bridge of Allan, N.B., September 14.

REPLY.—1. The best course will be to let the bees clear the honey from sections at once by carrying it down to their brood-chamber. If once candied, it cannot be reliquefied without a deal of trouble in melting combs and honey down. 2. To keep honey in sections liquid a warm dry place is best.

[3571.] *Mixed Honey in Same Combs.*—Enclosed is a sample of honey, cut from one of my sections. I should be glad if you could account for their peculiarity? The outside cells mostly contain quite clear honey of light colour, but when one cuts into the middle the honey is dark and muddy in consistency as this sample, and decidedly coarse in flavour. 1. Is this due to an admixture of honey-dew, and, if so, is there any means of preventing it, as all my sections are practically spoilt? 2. If it is not honey-dew, can you tell me from what flowers such honey is gathered?—E. K. HOUGHTON, Brondesbury, September 15.

REPLY.—1. The comb shows plainly the two kinds of honey, light and dark. This is not at all uncommon when the source

of honey changes during the gathering time, and bee-keepers on finding it so sometimes have to grade the kinds by uncapping only the light honey first, and after that is extracted uncap remaining combs. 2. The dark kind in sample is honey-dew.

REVIEWS OF FOREIGN JOURNALS.

By "Nemo."

In the *Bulletin de la Société d'Apiculture d'Alsace-Lorraine* a Polish bee-keeper (Dr. C. de Krasiki) made 132 bees sting to determine whether in every case of stinging a bee dies. After forty-eight hours' imprisonment only fifty-two died. M. Schiller Tietz thinks that the bee does not always lose her sting when stinging, and in such a case she survives, but dies when she loses her weapon of defence.

In the *Bulletin de la Société de l'Est* M. Melchior says that he saw a beautiful queen fall to the ground, she having been evidently poisoned by the fumes of tobacco smoke. She was covered with lice, and, wishing to get rid of them, she received too strong a dose. M. Melchior says a fine spray of sweetened water is often of more use than smoke.

In the *Bulletin de la Société Romande d'Apiculture* M. Bourgeois says that queen-rearing as recomended by Doolittle has not yielded with him the results he expected, and even Americans no longer practise this method. There is nothing to compare with the economy and good quality of queens from second swarms.

In the *Landwirtschaftliche Zeitung für Westfalen* we read that in the experiments carried out in the province of Pommern, it was found that the chemical composition of phacelia was similar to that of red clover, so that its value as a forage plant, if used green, is equally nourishing. It is sufficiently valuable as a bee plant, for the nectar contains only 35 per cent. of water.

In *Le Rucher Belge*, M. Leger discusses the merits and demerits of sugar for feeding bees. While admitting that honey is the only complete food for bees, he thinks bee-keeping would be impossible if we could not use sugar for bee-food as occasion may require. He also points out that even some honeys are not suited for this purpose and are injurious to bees. Sugar-feeding carried out in a rational manner gives favourable results. It is, however, a bad speculation to remove all honey and feed the bees solely on sugar; degeneration would soon follow, and bees would be less liable to resist diseases, and foul-brood would have free course in such weakened colonies. Avoid extremes, and while not proscribing sugar, use it not forgetting that bees having an abundance of honey in the spring are more energetic and lively than those which make their meals off sugar. Professional bee-keepers know that after several years of scarcity colonies lose vigour and deteriorate.

In *Elsass-Lothringischer Bienen-Zuchter* the editor, M. J. Dennler, gives instructions for easily finding a queen in vicious colonies of bees. He says: Towards eleven o'clock carry the colony to some corner in the garden and put an empty hive in its place. The colony will then contain only young bees not at all aggressive. The same plan can be adopted in looking for a queen or in removing a queen cell in a very populous hive. These operations should only be performed when bees are working briskly.

A BEE-KEEPING RECLUSE.

At Great Canfield, in Essex, James Mason, aged forty-seven, has lived in complete seclusion for over thirteen years, in fulfilment, as is alleged, of a vow he made after being jilted in a love affair that he would never look upon a woman's face again. Apparently this decision has extended to males also, for during the period mentioned only two men, excepting his brother, have caught a glimpse of the strange recluse. The other day, however, a newspaper representative made his way to Sawkin's Farm, where the man's mother and brother live; but the recluse is the owner of the place. The brother said that the hermit had lived unmolested for thirteen years in an enclosure, and no one could be allowed to enter it. The enclosure in question covered more than an acre of ground, was surrounded by a very high and thick hedge, and along the bottom barbed wire was stretched, so that it was almost impossible for anyone to effect an entrance. On the outer side of the main fence was a ditch ten feet deep and twelve feet wide, the earth being banked up so as to form a barricade twenty feet high, and on the top of this another thick hedge was planted. The work was done twelve years ago by the hermit all in the night time. Inside the fence there was a labyrinth of trees and undergrowth, among which barbed wire could be seen stretched, and a shed with a corrugated iron roof with a brick chimney at the side. The brother explained that the hermit kept dozens of hives of bees and grew flowers and furze especially for their delectation. The honey when collected was disposed of by him. The brother disparaged the love story, explaining that the recluse was simply "nervous."—*Standard.*

Bee Shows to Come.

September 17 to 24, at the Agricultural Hall, London.—Honey Show in connection with the twelfth Annual Exhibition and Market of the Grocery and Kindred Trades. Numerous classes and liberal prizes for comb and extracted honey and beeswax. **Open to all British Bee-keepers.** Schedules from H. S Rogers, Secretary, Exhibition Offices, Palmerston House, Old Broad-street, London, E.C.

Special Notice.—In connection with above Show there will be a *Working Exhibit* illustrative of modern Bee-keeping and Honey-production, including *Demonstrations* with *Live Bees* and extracting honey from combs for sale by skilled experts.

October 4 to 7, at the Agricultural Hall, London.—Show of Honey and Bee-produce in connection with the British Dairy Farmers' Association. **Entries closed**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

*** A correspondent writes inquiring "if Abingdon-on-Thames is a fairly good honey district." Will any reader acquainted with the bee-forage of that locality who sees this oblige by sending a line of reply?

F. Bundy (Northants) and Oxensis (Oxford).—*Sugar for Syrup Making.*—In both cases sample sent is moist, unrefined sugar, and as such is not suitable for autumn syrup food. Refined cane sugar in crystals is the proper kind for syrup making in autumn, but yellow crystals will do for spring food. For candy making, use white refined crystals or loaf sugar.

Adam (Sawbridgeworth).—*Remedies for Foul Brood.*—Our view of the value of the remedy you name is given on page 150 (top line) of "Guide Book," and we can add nothing to what is there said. If combs could be freed from foul brood as you "have been informed" the disease would have been exterminated long ago.

Japp (Midlothian).—*Judging Old Honey from New.*—There is nothing beyond aroma and full flavour to enable a judge to say whether liquid honey is of current year or not. We have seen well-preserved samples, over a year old, which could not be detected among the best new honey by competent judges.

H. Spencer (Teddington).—*Varieties of Heather.*—Of the two sprigs of heather sent, the small flowered one is *Erica calluna* or ling, the other is *E. tetralix* The first-named is the best heather for bees; the second is useless for honey-gathering.

G. R. W. (Fife).—*Insect Nomenclature.*—The specimen sent is a female of the saw-fly (*Sirex gigas*).

G. M. T. (Brocklesbury). — *Artificial Honey.*—Full particulars of what you term "the article" and our opinion regarding it will be found in the B.B.J. of January 8 and 15 last year, under the heading "Fruit Sugar, What is It?" The two numbers may be had, post free, for 2½d.

Suspected Combs.

D. Alexander (Banbridge).—Combs sent are simply pollen-choked, and consequently useless in the hive.

Bill Bayley (Shrewsbury).—Comb is affected with foul brood of old standing. Judging by sample and particulars sent, we advise burning the lot.

W. C. G. L. (Birmingham).—The comb is badly diseased, but the appearance of dead larvæ does not coincide with that of *Bacillus alvei.* It is probably one of the other forms of bee disease, about which there has been much speculation and discussion among scientists of late.

Special Prepaid Advertisements.

Twelve words and under; Sixpence; for every additional Three words or under, One Penny

Advertisements for current issue must be received by first post on Tuesday.

SECTIONS. 3½ doz. from fruit and clover, 10s. doz. carriage paid. Deposit. Davies, Expert, Abergwilly. D 69

QUEENS. Virgins from 1s. Fertiles from 2s. Nucleus 7s. 6d. Dawkins, Sutton Coldfield. D 63

DRIVEN BEES, with Queen, 3s. per lot. Boxes free. Martin, Beekeeper, Wokingham. D 64

PURE ENGLISH HONEY, light coloured, 6d. lb., in 28-lb. tins. Sample 2d. H. May, Kingston, Wallingford. D 66

HONEY, medium colour, FOR SALE, about 100 bottles. Softley, Massingham, King's Lynn. D 74

FOR SALE, 2 doz. well finished SECTIONS. 16s. Mrs. Garnett, Burghwallis, Doncaster. D 71

6D. PARCEL strong SEEDLING WALLFLOWERS, blood red, yellow. Mixed, 1s. 3d. hundred. All post free. Harry Robinson, Deanshanger, Bucks. D 70

WANTED, BEES or APPLIANCES. Exchange new Harp Zither, £1. Litman, Castle Cary. D 73

WANTED, cheap, THREE best quality 1904 TESTED QUEENS. Moore, Gunhouse, Bowbridge, Stroud. D 72

20 STRONG healthy STOCKS BEES in Skeps, with plentiful winter stores. 12s 6d. each on rail. Sole, Expert, 105, Graham-road, Wimbledon. D 79

A BEEKEEPER wants SITUATION to attend to bees and help in garden or otherwise. References. Hastings, Welcombe, Stratford-on-Avon. D 80

FOR SALE, 12 STOCKS of BEES in good bar frame hives. Offers invited.—Rogers, Heath Apiary, St. Albans, Herts. D 76

2 CWT. of light-coloured pure extracted HONEY, in 28-lb. tins. What offers to clear?. Sample, 3d. S. Eccles, Clanfield, R.S.O., Oxon. D 68

DRIVEN BEES, 1904 Queens (healthy), 3s. 6d., 4s., 5s. Cases free. Brown, Withington, Shrewsbury.

FOR SALE, Rymer Heather HONEY PRESS. Purchased from Meadows 1903, equal new. Price, £1 10s. W. Sproston, Shugborough, Great Haywood, Staffs. D 67

WANTED, DRIVEN BEES. Must be cheap, 1904 Queens. James Wallace, Bramhall, Cheshire. D 75

Editorial, Notices, &c.

THE CONFERENCE OF BEE-KEEPERS

The meeting at Jermyn Street on Thursday, October 6, will be wholly occupied by the conference of bee-keepers, called together to consider the question of foul brood legislation. In view of the prominence this important question has had in our pages, and the number of letters on the subject we have been compelled to withhold for want of room, few will object to its taking the place of the usual conversazione held annually in "Dairy Show" week, and we earnestly hope that every county association will realise the urgent need for sending one or more delegates to Jermyn Street, in order that the meeting may be a full and representative one, capable of arriving at a decision worthy of the occasion.

The main or really salient points for discussion are few in number—the fewer the better, to our mind—in fact, they are embodied in two questions: (1) Is there a general demand for legislation on the part of county associations and the great body of bee-keepers, and what form should the said legislation take? (2) Are there substantial grounds for supposing that County Councils will unite in asking the Government to introduce a moderate, non-contentious, and adoptive measure, and would put it in force if obtained? The crux of the whole matter lies in the above points, and if a reasonable and definite conclusion with regard to them can be arrived at, we hope that some tangible result may be obtained beneficial to the whole bee industry in this country.

The idea has been suggested in some quarters that the council of the B.B.K.A. is opposed to legislation, but no foundation whatever exists for such a suggestion. There has been nothing beyond reasonable and proper hesitation about moving in the matter until it is ascertained beyond reasonable doubt what amount of support in the direction named above will be accorded. On the other hand, it is safe to say that if legislation is to be secured at all the B.B.K.A. is the most likely body to obtain it.

Referring to the proposed Bill brought prominently forward of late, called by some "Mr. Saunders' Bill," a perusal of it will show, by comparison, that it is practically—indeed, almost literally—the Bill drafted by the B.B.K.A. in 1896. There are a few slight alterations, but some at least can hardly be called improvements. For instance, the one which extends the scope of the measure to Ireland. With regard to this, it is thought that the council of the B.B.K.A. will do well to allow the Irish Bee-keepers' Association to take its own course in the matter of dealing with a foul brood Bill for Ireland. After what has been done by the "Congested Districts Board," and is now being done by the new "Department of Technical Instruction for Ireland" in giving Government aid to bee-keepers in the Sister Isle, it would seem advisable that we on this side the Channel should keep our cause apart in approaching our Board of Agriculture. We may also allude to the clause dealing with compensation for compulsory destruction of diseased bees. This we consider to be a weak point, to name 10s. as compensation, though it was included in the original Bill of the B.B.K.A. We quite agree that Colonel Walker's suggestion of 5s. as the maximum being ample, for what is practically worse than valueless. Much credit is due to Mr. Saunders for again bringing the matter of foul brood legislation forward for re-consideration, and arousing interest in it, and while wishing well to his efforts, we fear more difficulty than is supposed will be experienced in getting a Government measure passed, for he is still a long way behind the point reached by the B.B.K.A. in 1896.

With regard to the difference between the original Bill of the B.B.K.A., as drafted in 1896, and the one now being promoted by Mr. Saunders, we purpose printing the two Bills side by side in next week's B.B.J. This will serve to clear up any possible confusion that might arise in the minds of those attending the conference.

In concluding, we again appeal for a good attendance of representatives at the conference, at which it is most desirable that Mr. Saunders should be present.

BRITISH BEE KEEPERS' ASSOCIATION

The monthly meeting of the Council was held on Wednesday, September 21, at 12, Hanover Square, W., Mr. T. I. Weston occupying the chair. There were also present Colonel Walker, Messrs. W. Broughton Carr, J. B. Lamb, W. Sole, E. D. Till, E. Walker, and the Secretary. Letters apologising for inability to attend the meeting were read from Mr. T. W. Cowan, Mr. W. H. Harris, Miss Gayton, Mr. G. H. Morrel, M.P., and Mr. William Richards.

The minutes of the previous meeting having been read and confirmed, Mr. T. I. Weston gave the Report of the Finance Committee, and brought forward a list of accounts for which cheques were required. The report was approved.

An unusually large number of reports upon recent examinations were dealt with

in respect to examinations in Perthshire, Devonshire, Kent, Lincolnshire, Somersetshire, Warwickshire, Wiltshire, Worcestershire, and Yorkshire, and as a result it was resolved to grant third-class certificates to the following fifty candidates, viz.:—Misses L. E. Attneave, Winifred Allen, Madeline Bale, Ellen T. Bartlott, Ethel M. Bennett, Hilda Caton, E. Jeffries Davis, Agnes P. Heydweiller, M. Holmes, Bessie A. Ince, Rebecca Joseph, Gertrude Kalinsky, Henriette Marchetti, Marion E. Mason, Elizabeth McKerrow, Marion Pittis, Lucy Pollard, Janet McDougall Ritchie, Margaret Ritchie, Margaret P. Rogers, E. Salter-Whiter, Eva Slacke, D. Stephenson-Peach, A. M. Sopper, Ada Traill, and Theresa Waterhouse, Major Alfred Perkins, D.S.O., J.P., Messrs. W. H. Allard, Guy B. Bissett, E. Blackmore, Thomas Bradford, J. Burbidge, John Charlton, C. W. Dyer, Edward Franklin, F. W. Gelder, H. C. Gibson, Walter Golding, George Greenwood, T. L. Griffiths, Edward Hardiman, J. D. Hay, Frank W. James, F. W. Moore, G. W. Naish, George Ritchings, J. Seeney, Robert Sims, L. E. Snelgrove, and F. G. Storrs.

Further correspondence relating to the question of foul brood legislation was read to the meeting, and after discussion it was decided to submit a summary of the replies received from the various County Associations to the Conference of Delegates to be held at 105, Jermyn Street, S.W., on Thursday, October 6. It was resolved to devote the whole time at disposal on the day named to a full and thorough discussion of the subject and to dispense with the usual evening conversazione. Members of the Association and friends interested in bee-keeping will be welcomed at the meeting as usual.

The next examination for second-class expert certificates will take place on Friday and Saturday, November 18 and 19, and the next meeting of Council on Wednesday, October 19.

SURREY BEE-KEEPERS' ASSOCIATION

SHOW AT CRYSTAL PALACE.

The annual show of the Surrey Bee-keepers' Association was held on September 15, 16, and 17, at the Crystal Palace. Great interest was evidently taken in the show, judging from the large numbers of people who visited it each day. The entries were not quite so large as last year, but the quality of the honey was very good considering the adverse season. The exhibition, however, was a good one, and included a new class for instructive exhibits. Mr. F. B. White, the secretary of the association, who took first prize in the last-named class, is to be congratulated on his display, which occupied half the width of the hall. He also won first prize for "Bee products," and several other prizes. Several interesting demonstrations in bee culture were given each day by Mr. C. T. Overton, of Crawley, in the grounds of the Palace, and also in the concert hall itself was a tent where bees were seen at work. Many hundreds of persons attended the demonstrations. Altogether the exhibition was of a most interesting character. Mr. F. B. White, hon. secretary and treasurer of the association, made all the arrangements in a most satisfactory manner, and the exhibits were judged by Mr. F. Brett, of Brighton, and Mr. A. J. Carter, of Billingshurst, who made the following awards:—

MEMBERS' CLASSES.

Twelve 1-lb. Sections — 1st, E. Bontoft, Caterham Valley; 2nd, F. Bowers, Purley; 3rd, Mrs. Cockayne, Roehampton; h.c., D. H. Welch, Reigate.

Six 1-lb. Sections:—1st, F. Bowers; 2nd, F. Perigal, Reigate; 3rd, Miss C. Irving, Camberley; v.h.c., H. Sayers, jun., Chessington; c., T. J. D. Hull, Redhill.

Six 1-lb. Sections of Heather Honey.—1st, E. P. Betts, Camberley.; 2nd, A. Seth-Smith, Cobham.

Three Shallow-Frames Comb Honey for Extracting.—1st, J. W. Ringer, Tatsfield; 2nd, C. A. Overton, Charlwood; 3rd, F. B. White, Redhill; c., J. Kachler, Croydon.

One Shallow-Frame Comb Honey for Extracting.—1st, G. H. Wynn, Haslemere; 2nd, J. Kachler, Croydon; 3rd, F. B. White.

One Standard-Frame Comb Honey for Extracting.—1st, G. H. Wynn; 2nd, F. B. White.

Twelve 1-lb. Jars Extracted Honey (Light).—1st, M. J. Lamboll, Chiddingfold.

Six 1-lb. Jars Extracted Honey (Light).—1st, A. Tennant, Lingfield; 2nd, W. Sole, Wimbledon; 3rd, H. Dann, Wallington.

Six 1-lb. Jars Heather Honey.—1st, J. Sharland, Haslemere; 2nd, A. Seth-Smith; 3rd, W. E. Hackett, Cobham.

Six 1-lb. Jars Extracted Honey (Dark).—1st, E. Bontoft; 2nd, P. W. Worsfold, Shalford.; 3rd, A. E. C. Mumford, Redhill; v.h.c., A. Tennant, Lingfield; h.c., T. W. Ringer, Tatsfield; h.c., C. A. Overton, Charlwood.

Six 1-lb. Jars Granulated Honey.—1st, M. J. Lamboll; 2nd, A. E. C. Mumford; 3rd, E. P. Betts.

Display of Honey and Bee Products (exceeding 100 lb.).—1st, F. B. White; 2nd, A. E. C. Mumford.

Beeswax.—1st, A. E. C. Mumford; 2nd, S. Silvester, Old Malden; 3rd, J. W. Ringer; h.c., H. Dann, Wallington.

Articles of Food containing Honey.—1st, T. H. E. Watts-Silvester, Surbiton; 2nd, A. Seth-Smith.

Six Jars Extracted Honey (open to members who have not taken a prize previously).—1st, G. H. Wynn; h.c., S. Silvester.

OPEN CLASSES.

Six 1-lb. Sections.—1st, J. Lee and Son, Andover; 2nd, C. Lodge, Chelmsford; 3rd, Thos. Hillier, Andover; v.h.c., W. J. Cook, Market Rasen; h.c., Miss A. C. Brown, South Devon.

Six 1-lb. Jars Extracted Honey (Light).—1st, J. Lee and Son; 2nd, W. J. Cook; 3rd, Rev. M. W. Osmaston, Dover; v.h.c., W. Patchett, Caistor; h.c., T. Hillier, Andover; c., A. E. Russell, South Lincs; c., J. B. Houle, North Devon; c., C. Lodge, Chelmsford.

Three Shallow-Frames Comb Honey.—1st, Rev. M. W. Osmaston; 2nd, J. Lee and Son; 3rd, C. Lodge; v.h.c., T. Earl, Crawley; h.c., G. M. Tune, Llangollen.

One Shallow-Frame Comb Honey.—1st, J. Lee and Son; 2nd, T. Earl, Crawley.

Beeswax.—1st, G. Leeding, Sherborne; 2nd, C. Lodge; 3rd, J. Lee and Son.

Interesting and Instructive Exhibit connected with Bee Culture.—1st, F. B. White; 2nd, G. Dow, St. Mary Cray, Kent.

Observatory Hive with Bees and Queen.—1st, C. L. Greenhill, Wimbledon; 2nd, J. Lee and Son; 3rd, A. E. C. Mumford.

Collection of Hives and Appliances.—1st, J. Lee and Son; 2nd, C. T. Overton, Crawley; 3rd, E. H. Taylor, Welwyn.

Complete Frame-Hive for General Use.—1st, E. H. Taylor; 2nd, C. L. Greenhill; 3rd, A. E. C. Mumford.

Outfit for Beginner in Bee-keeping.—1st, C. L. Greenhill; 2nd, E. H. Taylor; 3rd, C. T Overton.—(*Communicated.*)

NOTTS BEE-KEEPERS' ASSOCIATION.

ANNUAL SHOW.

The annual show was held in connection with that of the Moorgreen Horticultural Show on Tuesday, September 6. The duties of judging the bee-exhibits were carried out by Mr. P. Scattergood, assisted by Mr. R. J. Turner. This was not a heavy task, as the entries this year were fewer in number owing to the poor season generally in the county. With the exception of the first-prize exhibit, the majority of the honey shown was of a darker colour than usual. The following are the awards:—

Collection of Hives and Appliances.—1st, G. H. Varty, Colwick.

Complete Frame Hive for General Use.—1st, G. H. Varty.

Trophy of Honey in any Form and of any Year.—1st, George Hayes, Beeston, Notts; 2nd, George Marshall, Norwell.

Six 1-lb. Jars Light-coloured Extracted Honey.—1st, G. H. Pepper, White Post, Farnsfield; 2nd, A. G. Pugh, Beeston, Notts; 3rd, A. H. Hill, Balderton; h.c., James Stokes, Harley Melton.

Six 1-lb. Jars Dark-coloured Extracted Honey.—1st, A. G. Pugh; 2nd, G. H. Pepper; 3rd, George Marshall.

Six 1-lb. Sections.—Equal 1st, G. Puttergill, Beeston, and D. Marshall, Cropwell Butler; h.c., George Marshall.

Six 1-lb. Jars Granulated Honey.—1st, G. H. Pepper; 2nd, H. Merryweather.

One Shallow Frame of Honey for Extracting.—1st, G. H. Pepper; 2nd, A. H. Hill; 3rd, D. Marshall; h.c., George Marshall.

Six 1-lb. Jars Extracted Honey (novices).—1st, Cecil Hayes, Beeston, Notts; 2nd, E. Chapman, Hucknall.

Honey Vinegar.—1st, J. Gray, Long Eaton.

Observatory Hive with Bees and Queen.—1st, D. Marshall; 2nd, W. Darrington, Bulwell; 3rd, George Marshall; 4th, A. H. Hill.

Beeswax.—1st, W. Darrington; 2nd, G. E. Puttergill; 3rd, George Marshall; v.h.c., A. H. Hill.

GEO. HAYES, Secretary.

LEICESTERSHIRE B.K.A.

ANNUAL SHOW.

This Association held its annual show in connection with the Loughborough Agricultural Association on Wednesday, September 21. Splendid weather prevailed, and considering the season a very nice display of honey was staged. Mr. A. G. Pugh, Beeston, Notts, kindly officiated as judge and made the following awards:—

Twelve 1-lb. Jars Extracted Honey.—1st, J. Waterfield, Kibworth; 2nd, A. Ward, Market Harborough; 3rd, E. A. Jesson, North Kibworth; h.c., H. Dilworth, Shangton.

Twelve 1-lb. Sections.—1st, J. Waterfield; 2nd, J. Fewkes, Great Glen.

Single 1-lb. Jar Extracted Honey.—1st, J. Waterfield.

CLASSES FOR LOUGHBOROUGH AND DISTRICT.

Six 1-lb. Jars (Light) Extracted Honey.—1st, A. Brown; 2nd G, J. Levers; 3rd, Mrs. Baldock.

Six 1-lb. Jars (Dark) Extracted Honey.—1st, Mrs. Baldock; 2nd, W. Baldock; h.c., Miss E. A. Wadkin.

Six 1-lb. Sections.—1st, Miss E. A. Wadkin.—(*Communicated.*)

OXFORDSHIRE B.K.A.

ANNUAL SHOW.

The above exhibition was held in Blenheim Park in connection with the Woodstock Agricultural Show. A fair quantity of honey was staged, although the season in Mid Oxon has not been the most favour-

able for honey gathering. This was in a large measure due to the almost total disappearance of sainfoin, caused by the wet season in 1903, along with the prevalence of honeydew this year. Nevertheless, some excellent exhibits were on view, the most successful exhibitor being Mr. G. M. Coles, of Chipping Norton, as will be seen below by the awards. Some splendid beeswax was shown, and altogether the judges, Messrs. T. E. Hancox and A. Humphries, had anything but an easy task in making the awards, which were as follows:—

Six 1-lb. Sections.—1st, G. M. Coles, Broadstone, Chipping Norton; 2nd, H. M. Turner, Northleigh; 3rd, P. Scarsbrook, Kirtlington; v.h.c., F. M. Gask, Northleigh.

Six 1-lb. Jars (Light) Extracted Honey.—1st, H. M. Turner; 2nd, D. Hancox, Deddington; 3rd, C. T. Edens, Chadlington.

Six 1-lb. Jars (Medium) Extracted Honey.—1st, P. Scarsbrook; 2nd, E. Belcher, Cutmile Park; 3rd, H. M. Turner.

Collection of Honey.—1st, P. Scarsbrook.

Beeswax.—1st, E. Belcher; 2nd, P. Scarsbrook; 3rd, D. Hancox; v.h.c., H. M. Turner.

Single 1-lb. Section (open).—1st, G. Jeffries, Andover; 2nd, G. M. Coles; 3rd, Miss G. M. Baker, Ramsden, Oxon.

Single 1-lb. Jar Extracted Honey (open).—1st, G. M. Coles; 2nd, J. D. Softley; 3rd, W. Patchett, Cabourne, Lincs.—(*Communicated.*)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

[5642.] *The Past Season.*—Slow and backward as the bees were in early spring, and weak as many hives were at the opening of summer, they pulled up on the advent of good weather with amazing rapidity, so that the best stocks were able to profit to the full by July's abundant flow and excellent weather. Second-class colonies even did good work, and their results proved fully up to the average, but little more. Third-class stocks, the "weaklings" of early spring, pulled up just too late to secure the full advantage of July's flow, with the result that they gave practically no surplus. Some were re-queened, and should give a good account of themselves another year. I hear all round that there is a fair proportion of these non-producers of surplus. July, as I have recorded, was an excellent month, but August was not. Our expectations of a good heather harvest, as too often has been the case, have not been realised. This class of honey is scarce, and consequently dear. I hear of its selling at 1s. 3d., and of its being retailed even at 1s. 6d. and 1s. 8d. per lb., so some are attending to Mr. McNally's wise injunction given in last month's *Record*. Personally, the season all over, with the exception of two outstanding ones, is the best in my experience. At present every hive is teeming with bees. All are amply supplied with stores to keep them going to next June without any feeding whatever. They also show fair-sized patches of brood, which I like to see during September, as these late-hatched bees are the mainstay of the colony in spring, when foraging flights begin. Hereabouts bee-keeping is certainly not on the down grade, for within recent years large numbers of new aspirants have entered our ranks, and many old hands have doubled their stock. English swarms replaced the blanks caused by the late two bad seasons, and these have done well, amply compensating their owners for all outlays the first season. Many, too, have gone in for driven bees, and I am glad to record in general great care and generous treatment by our bee brothers over the Border.

Native v. Foreign Bees.—The writer of query 3548 (page 358) might note the following before destroying his blacks and investing in foreign bees, however fair and tempting these latter may be in name or appearance. Bee-keeper No. 1 bought a valuable Italian queen last year. By the end of the season her progeny developed unmistakable signs of foul brood. They were treated as a "shook swarm" late in autumn and placed on new combs. The queen must have had her very being impregnated with the disease, for early this year it was so rampant that the lot was cleared out to save disaster. Bee-keeper No. 2 got a high-priced queen at the same time from the same dealer. By the end of last season they, though the hive was very populous, could not get a certificate of exemption. In spring they clearly showed doubtful cells, which increased as the breeding season progressed, and just the other day they were condemned to the flames. Not a cell scarcely showed healthy brood, and bees have dwindled to a handful. Frames, combs, quilts, etc., were burned, but the queen and the few bees were kept for further experiment, being

(*Continued on page* 386.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

"Bee-keeping for small farmers" is a subject full of interest to agriculturists, and in illustrating below the apiary of a B.B.J. reader who is himself a farmer's son regularly occupied in farm work, we commend the following notes. Mr. Hurst says:

"My interest in bee-keeping took a practical form some ten years ago through reading in the *Farm Field and Fireside* articles on the subject. I commenced with a hive known as the 'Ivo Cottager,' a fixed comb-hive, with bars in which foundation can be inserted. The brood-box contained nine narrow bars and the supers seven wider ones. Of course this type of hive does not possess the advantages of a movable-frame hive, but I still use the supers on frame-hives if I happen to run short of surplus boxes, and when working for extracted honey they answer as well. As will be seen from the photo sent, I use various patterns of hives, but all are made to take the B.B.K.A. standard frame. The results, however, according to my experience, depend, not on the hive used, but on the management of the bee-keeper himself, combined, of course, with such important items as good bee-weather, crops of bee-forage grown near, etc. My apiary is situated at the back of a farmstead, and, being myself a farmer's son engaged in the various occupations of arable farming, I have not much spare time to give to the bees. In some seasons I get very good yields of clover honey of fine quality, but of late years white clover has not been grown so plentifully as formerly, probably owing to the fact that the land is being heavily manured, and as white clover is sown only in conjunction with red clover and rye-grasses, and the latter plants generally make such headway that the white clover has little chance to come to perfection.

"Although the main source of honey is from clover, there are various other plants which keep the bees going, both before and after the real harvest.

"I generally take off supers at the end of July, and then set about the work of preparing my stocks for the following season by re-queening all such hives as require it, and seeing that the combs are in good condition for safe wintering. All honey gathered in the autumn from August onward is left for the bees' own consumption, and I find it much better all round than the trouble and expense of preparing and giving sugar-syrup for the purpose. A stock the bees of which cover ten frames in September, and headed by a young queen, with winter stores consisting of from two and a half to three feet of sealed honey and good patches of brood in the centre frames, combs fairly new, and housed in a substantial hive at this season, will come out in fine condition in spring.

"Having tried different methods of pre-

MR. T. HURST'S APIARY, DOWNHOLLAND, ORMSKIRK, LANCASHIRE.

venting swarming, the conclusion I have arrived at is that if the bees will persist in swarming, it is best to let them have their own way, or, as an alternative plan, make an artificial swarm of them, having the bees on a few frames and putting the new hive on the old stand.

"In concluding my few notes, I may say I have been a reader of your journal for about eight years, and always find it of great interest and service."

("*Among the Bees*" *continued from p.* 384.)

joined up to a driven lot. Bee-keeper No. 3 got an expensive queen from the same dealer in June last year. He was highly enthusiastic over her prolificness, and deservedly so, for at Christmas, with an intensely keen frost prevailing, he showed me the outsides of ten frames literally packed with bees. Alas, in June bees, brood, frames, and quilts were offered up as a holocaust! He described them as literally rotten with foul brood. Bee-keeper No. 4, smitten with the mania for a foreign queen, paid a half-guinea for one. By May of this year they had, from a full, populous lot, dwindled down to a handful. He was utterly puzzled, until a friend called and explained that they were far gone with the dread fiend, and together they wisely made a bonfire of them. The four queens cost, I think, 35s. They all came from Italy direct, with a rest on the way. Is it a simple coincidence that these four queens should all develop this foul scourge so very soon? I make no comment at present.

Shifting Bees.—Some of those, like your correspondent (3539, page 347), might experiment with the plan I recommended in the *Record* for August. In shifting colonies from five to fifty yards or over, carry the hive as it stands without any shaking or jarring and place it down on the new site. Pack the entrance pretty tightly with moss or "fog" to such a depth as will occupy the bees some time in eating their way out, so as to give them some worrying. Then, when they obtain an exit, they seem to have their attention so taken up with the unusual circumstances in which they are placed that they make reckonings of their bearings all round. In this way they recognise the new location, and in future flights—generally short excursions at this season—they spot their new home and make it the central point in their extended vision, with the result that they take to the new surroundings and forget the old stand. The usual precautions of placing a branch of a tree or board slanting up in front may also be taken, to make assurance doubly sure.

The Yearly Tribute.—At this season the wonted eviction of drones takes place. Being now useless consumers, "their room is more valued than their company," as an ancient writer puts it, so the decree for their ejectment goes forth, and ruthlessly and pitilessly the prescient little Amazons evict their burly brothers, or half-brothers. It seems here that Nature is a cruel taskmaster, for she exacts a yearly tribute of flesh and blood, like the dragons of Pagan mythology. I have recently had my attention specially centred on this strange tragedy, because of an intelligent beginner taxing all my powers of knowledge (and invention) to explain the "reason why." Nature is lavish in her provision for anticipating the future, and as Tennyson so expressively wrote:—

"Of fifty seeds she often brings but one to bear."

Bee-keeping in Banffshire.—In regard to the future, the outlook is declared to be bright. The industry is becoming more important year by year, and bee-keeping is extending rapidly all over the country. In spite of the two last unpropitious seasons, the number of those engaging in the pursuit has largely increased this year, and most of those already embarked in it have very considerably augmented the number of their hives by home swarms, driven lots of bees got from England, and English swarms. The number of colonies placed in winter quarters is very much in excess of any previous year. This is as it should be, as bee-keeping is one of the most easily practised and best paying of our minor industries. What we want—and that very badly—is organisation. At present we are like so many units working away in a tentative way, each depending on his own resources. With combination we could in many ways act in concert, and aid, extend, and foster the industry, so that the number now engaged in it might be more than doubled. The friction with other apiarists would tend to emulation and enlightenment in our practice of apiculture, while an association would aid the individual in getting a better and readier market for his honey, and enable him to sell his produce at an enhanced value. With so many enlightened bee-keepers in the county, why should we not have a Banffshire Bee-keepers' Association?—D. M. M., Banff.

FOUL-BROOD LEGISLATION.

A COMMON-SENSE VIEW OF THE CASE.

[5643.] After carefully thinking over the subject, and with due regard to the correspondence which has been going on in the pages of the B.B.J., I remain of the opinion which I held when I was one of a deputation of the B.B.K.A. in 1896 to the

Board of Agriculture, viz., that legislation is called for. The reasons in favour of enactments to combat "bee-pest" (foul brood) are so obvious as not to need recapitulation. What is much more necessary is to meet with common-sense arguments in opposition to legislative interference. The principal objections raised to such interference seem to be as follows:—

1. *Infringement of Liberty of the Individual.*—As this point has been swept aside in the case of infectious and contagious diseases in man and animals, it has no force when urged against licence to maintain and spread a malignant disease in the animals in which bee-masters are interested.

2. *Fear that Inspectors will Tamper with Supered Stocks.*—This suggestion seems to me first to ignore that those who would be entrusted by County Councils with the duty of visiting apiaries would be men not only possessing common-sense, but possessing also decided sympathies with bee-keepers, and therefore certain to show all consideration in the discharge of their functions as inspectors. Secondly, it would probably be arranged that, except in certain, or very suspicious, cases examination of stocks, if deemed essential, would take place either just before or after the supering season.

3. *Legislation is said to be, on the one hand, unnecessary, and, on the other, impracticable.*—The answer to these two points is, first, that voluntary efforts have entirely failed to eradicate, or even greatly reduce the ravages of the disease; and secondly, that to say that enactments dealing with it are impracticable begs the question altogether.

4. *Legislation, where tried, has been a failure.*—If this statement means that bee-pest still exists where enactments relating to it have been in force, there is, no doubt, some truth in the allegation; but the same things may be said with regard to smallpox, diphtheria, and scarlet fever among human beings, and pleuro-pneumonia, swine-fever, and rabies among animals; but the person who would deny a large effectiveness to the measures in force about all these diseases, must possess a hardihood of obtuseness, or "a faculty for ignorance," or a power of reckless misstatement, any of which would disentitle him to the slightest attention.—W. H. Harris, Hayes End, Middlesex, September 19.

THE PRICE OF HONEY.

[5644.] Last year we had a discussion in in the B.B.J. on this subject, but I observe that honey is offered this year in your advertising columns at 45s. per cwt. There is no doubt that some bee-keepers have a difficulty in disposing of their produce, but if the honey be any good for table use, there is no necessity to offer it at the low price quoted above. Others of your advertisers are properly asking from 56s. to 60s. per cwt., but with honey offered in the same column for 11s. per cwt. less, the ground is cut from under their feet. A bee-keeper could, without acting detrimentally to others, offer his honey at 45s. to a fellow bee-keeper who wants it to sell again in bulk to his wholesale customers, or he might let a honey dealer have it for the same purpose, but I think he should avoid selling it direct to the wholesale shopkeepers at that low figure. The wholesale houses buy, as a rule, at 56s. or 60s., and re-sell it wholesale at 74s. 8d. or 93s. 4d. per cwt. If they are offered honey at 45s., the wholesale honey dealer who buys for the wholesale trade is entirely cut out, and the great body of bee-keepers have to drop their price. Honey is an article which has not an absolute fixed value, its price is mainly regulated by the common action of bee-keepers; if many offer at a low figure the rest will have to do so, and no one will be a gainer but the wholesale trader. Let us be business-like in this matter. We read of honey being sold at Conway Fair at 1s. 6d. per lb.; the Bee Journal's report says 700 lb. was disposed of at this price, and that the demand exceeded the supply. It is quite obvious, therefore, that a little push and originality on the part of a honey-seller would enable him to avoid offering honey under five pence per lb., I repeat that there is no necessity to do so, and that it is injurious to other bee-keepers, and that it will not pay in the end.—W. J. Farmer, Truro, September 24.

THE BEE SEASON IN ESSEX.

[5645.] I have read the letter of "R. J. T." on page 353 of B.B.J. for September 8, entitled "The Season in Essex." Your correspondent gives a general idea as to the small average yield of honey per hive in his district of our county, which is certainly disheartening, and I deeply sympathise with them in their very disastrous results. But while sympathising with our brother bee-keepers, I am glad to say my own honey harvest (although not up to my usual average) is on the whole very satisfactory. My best stock gave me twenty shallow-frames of honey, weighing 62 lb. net, or minus the frames. My whole average of surplus honey taken is over 26 lb. per hive, and I have in addition a number of frames about half full of honey, which I am using for feeding. I may also add that a considerable portion of it is of excellent colour, the

rest being of very fair colour, and all excellent in quality. None of it is very dark, and the admixture of honey dew is so little as not to be worth mentioning. Considering, therefore, what appears to be the dearth of honey in Essex, I am very lucky to get so much. I send name and address, and sign—FORTUNATE, Saffron Walden, September 20.

WHERE HONEY CROP HAS FAILED.

RECIPE FOR "MARROW" JAM.

[5646.] In view of failure in the honey-crop in many districts this year, and the consequent shortage of it on the breakfast table, I send on a recipe for making a substitute in the shape of vegetable marrow jam, which has found much favour in my home, and may be of use to B.B.J. readers:—Take ripe marrows, peel and core them, and cut into pieces about 1 in. square. To 4 lb. of cut up marrow put 3 lb. sugar, three lemons, with their rind cut up as small as possible, 2 oz. whole ginger, crushed and put in a muslin bag. Put sugar with marrow and let it stand twelve hours; then boil marrow and sugar 1½ hours, after which add ginger and lemons and boil for two hours more. This makes a jam of delicious preserve, especially when over six weeks old, and makes a good substitute where honey is scarce. Trusting I have made the recipe clear, I send name and sign—GINGER, Thornton Heath, September 22.

DRONE-BREEDING QUEENS.

[5647.] I should like to tell "W. F. H." (3567, page 378) that the year before last I had a similar experience to the one he mentions. I purchased several virgin Italian queens, which successfully mated, but during the remainder of that season they deposited a considerable number of drone eggs in worker cells, and in one hive especially a large number of small drones were thus hatched, and then turned out. This ceased the following season, and the queens were quite satisfactory.—S. K. SAXELBY, Birmingham, September 24.

Queries and Replies.

[3572.] *Making Artificial Swarms in July.*—The portion of comb enclosed is from a stock artificially swarmed in the early part of July last. The colony is apparently queenless, there being no trace of larvæ or eggs. Will you be good enough to say whether foul brood is present, and advise as to future measures? I send name, etc., and sign—F. W. G., Dulwich.

REPLY.—There is foul brood of old standing in the very few sealed cells of sample comb. This being so, and bearing in mind that the bees left will be practically worthless before the winter is over, the only wise course is to make an end of bees and combs, and disinfect the hive before using again. The few details you give make it fairly clear that the stock was diseased when swarmed artificially in July, consequently the bees had lost heart in a measure, and made no attempt to re-queen themselves. But apart from that, we consider the month of July too late in the year for safely making artificial swarms in the south, because natural swarming is over by that time, and honey-gathering about ended. The middle of June is quite late enough for such operations in the south.

[3573.] *Clearing Surplus-chambers of Bees.*—I am a beginner at bee-keeping, and would be glad to know:—1. Is it necessary to use a "Porter" escape to clear the supers before removing for the winter, or could one brush the bees back into the hive? Being warmer here than in England, I suppose the bees should be packed for wintering a few weeks later? 2. Will you kindly give me your opinion on the sample of honey sent? It was gathered in July by an early May swarm. I took over 22 lb. of honey from the shallow-frame super, every comb being worked out. I send name, etc., and sign—FIDES, Jersey, September 20.

REPLY.—1. If a good super-clearer is available, it saves time and trouble, besides avoiding risk of starting "robbing" to use it when removing surplus in autumn. On the other hand, the bees may be shaken or brushed off combs as proposed if care is used and no upset caused among the bees of contiguous hives. 2. The sample of honey sent is not of good quality for table use. It is rank and coarse in flavour and of poor aroma. It has, we think, been gathered mainly from Trifolium incarnatum (crimson clover), which is known to yield honey of inferior quality.

[3574.] *Preparing Bees for Wintering.*—I send herewith two specimens of comb taken from a frame-hive. I only started with bees last July, and have left six frames in, and the bees seem to be a very strong lot. But the cells in combs apparently contain a considerable quantity of brown and other coloured substances, which I suppose to be pollen or "bee bread." We have squeezed the whole of the honey out, and of course this stuff with it. We have strained it as much as possible, but I am uncertain whether honey

so extracted is fit for table consumption, and so ask:—1. Will you give me your opinion? 2. I should also like you to let me know what you think of the combs in large and small glass jars as sent? I followed the directions in "Guide Book" as carefully as possible in wintering, and the bees, bought from a near neighbour, seemed easy to work with. Any help you can give will be greatly appreciated. I have not fed the colony up this autumn as, owing to ill-health recently, I have been unable to attend to them. 3. Should I give candy when packing down, and if so, must it always be placed on above the top-bars of frames below the quilts? At present the quilts lie close on the frame-tops, with a piece of brown paper over all. The bees refused to work in a rack of sections given them.—C. D.'A L., Harpenden.

Reply.—1. The mixture of honey and pollen obtained by squeezing the combs as stated would not be considered suitable for table use by most bee-keepers. On the other hand, there is nothing actually injurious about it, and—to use a common phrase—a little of it would go a long way. Had the honey been got out by means of an ordinary extractor it would have been quite good for table use, as all pollen would have been left behind in the combs. 2. The cells in samples of comb are three-parts full of fresh pollen. 3. If there is a less quantity of stores packed down than advised in "Guide Book," a cake of candy in addition will be very advantageous.

[3575.] *Queens Duplicating Eggs in Cells.*—Will you please say in B.B.J. why so many eggs are seen in cells of comb sent, and whether laid by a fertile worker or by a drone-breeding queen? I saw a young queen in the hive two months ago, but cannot now find any trace of her. The stock is not a strong one, and the cells containing so many eggs are confined to one frame only, but they are on both sides of that frame. I send full name and sign—W. A. B., Coventry.

Reply.—It would require a personal inspection of combs in hive to enable us to give a reliable opinion on the reasons for queen duplicating eggs as in sample of comb sent. There are dozens of eggs in single cells, some dried up, and freshly laid eggs thickly strewn on top of the shrivelled ones. If the only eggs in the hive are those in the single comb mentioned, it is safe to say the stock is not worth troubling about, as the queen is either unmated or worthless.

[3576.] *Dealing with Diseased Stocks.*—I have a stock that had foul-brood badly early in the summer, but now I cannot see one cell affected, and there are four frames containing brood on both sides. The hive is very strong in bees and plenty of stores, though I have taken from this stock (last month) one body-box containing nine standard frames all full, besides eighteen completed sections. I was going to shake the bees off into a skep and then put them into a clean hive on full sheets of foundation, and feed on medicated syrup, but, seeing no signs of disease, I wondered if it would be better to leave them as they are till next spring. Thanking you in anticipation of advice—Anxious, Lancing, September 17.

P.S.—In May and June I painted inside of hive with neat carbolic acid and sprayed combs and bees twice with f.b. solution.

Reply.—By all means leave the bees as they are if all trace of disease has been removed, as stated. The only thing needed will be to keep a careful watch on the hatching brood next spring, in order to make certain that the cure is complete.

[3577.] *Bee Nomenclature: Self-hybridising.*—Will you kindly let me know through the B.B.J. if No. 1 are English bees, also what race of bees No. 2 are? I have not introduced fresh blood into any of my hives, but was going to re-queen the hive from which bees marked No. 2 were taken, when I noticed a few bees with the yellow abdomen, and now I see there are a great number of them, so I came to the conclusion that they had re-queened themselves, and had got crossed with some other kind than mine. There are not many bees kept about here, but all are like my own. I enclose name and address, and sign—J. J. H., Durham, September 21.

Reply.—No. 1 bees are the common brown or natives. No. 2 are well marked Italian hybrids, the yellow bands being as clearly shown as in some pure Italians, plainly showing that a queen has been raised and has hybridised the stock by mating with a very yellow Italian drone.

[3578.] *Combs Built from Sugar Syrup.*—I enclose you a piece of comb made by driven bees out of, I presume, boiled sugar and water, or bee-syrup, the only food they had access to. I drove the bees on Friday, September 9, and kept them tied up in a skep till the 11th, when I hived them. I shall be glad to know whether this is an uncommon occurrence, as I have not in my short experience of bees seen anything like it before.—Henry Buckwell, Folkestone.

Reply.—It is, as all bee-keepers know, quite a common thing for bees to build combs from sugar syrup. As a matter of fact, many lots of driven bees completely furnish their hives with combs in autumn at a time when there is no honey to be had outside.

[3579.] *Curious Effect of Bee Stings.*—First I must thank you for information previously given through the B.B.J. I should now be pleased if you could enlighten me on the following:—Last year I hived a stray swarm for a friend, and in doing so had two stings on the right hand. About three minutes afterwards a tingling irritation was felt all over me, and my eyelids swelled very much. I also became almost deaf, and had severe pains in the stomach for two hours afterwards. I did not feel quite relieved until I had vomited several times, and then I felt sleepy for a long time. This year I had occasion to again handle the same swarm, and have experienced the same effects. I keep bees of my own, and have had more than twenty stings during an afternoon, but with no unpleasant effects whatever attached. I may say my friends bees are in a perfectly clean and healthy state. They are the common black English species. I send name and sign—ENTHUSIAST, Wokingham, September 23.

REPLY.—We cannot account for the curious and unpleasant effects of the stings as detailed above. We should certainly advise our correspondent to be shy in hiving bees from that hive in future. Two such experiences as the above should be quite enough for anyone.

[3580.] *Moving Bees One Mile—Wintering Driven Bees.*—I have twenty stocks of bees located a good mile from my present house, and want to move them to the latter. I therefore ask: 1. Would it be better to wait till cold weather sets in, or could I move them now without loss of bees? I should much prefer to move them now, as I could attend to them better. 2. How many frames of sealed syrup should driven bees have to winter upon if I put two or three lots together? Reply will oblige.—E. C., Wyvenhoe, September 19.

REPLY.—1. It would be more safe to defer removal for a few weeks, at least until bees fly less frequently than now; but if there is real urgency and you do not mind a little extra trouble, you might adopt the plan mentioned on page 386 by "D. M. M.," which would minimise the possible mischief. 2. Driven lots, if put on empty combs, should have about 30 lb. of syrup given them after hiving. If frames of sealed syrup-food are available and well filled, four of such combs will suffice for winter stores.

Bee Show to Come.

October 4 to 7, at the Agricultural Hall, London.—Show of Honey and Bee-produce in connection with the British Dairy Farmers' Association. **Entries closed.**

Notices to Correspondents & Inquirers.

P. (Hexham).—Pollen-clogged Combs.—Amount of Stores for Winter.—1. Combs in which the main portion of cells are filled with pollen will be useless in brood-nests next year. If only a few cells are so filled no harm will result if combs are left in the hive, but if removed indoors the pollen will get hard and mildewed, thus making it useless for feeding purposes. 2. There is nothing abnormal in combs being found broodless at this time, and if seven of the ten frames are nearly filled with sealed honey, the supply will be ample for wintering on.

F. J. (Mountmellick).—Wintering Bees.—1. Our preference is for a porous covering to frames in winter. Bed-ticking does very well, but if packing-down for winter is deferred till bees have given up gathering propolis for the year, a more porous covering is preferable (see chapter on "Wintering," as described in "Guide Book"). 2. Those who have the time and inclination to prepare bees in the best possible manner for safe-wintering will find it adantageous to remove all frames the bees cannot cover when being packed down; but with regard to spacing the frames wider apart during the winter months, that change is made in order to avoid the risk of thinner seams of bees, which are liable to get chilled—as they not seldom do—and perishing through being unable to reach the stores in severe frosts lasting for a long time.

A. W. B. (Hereford).—Pliable Beeswax.—Like yourself, we cannot understand the pliability of sample sent. Pure beeswax is always fairly brittle, but your sample cake will not break, however much it is bent. We, therefore, more than doubt its purity.

Honey Samples.

H. JACKSON (Crowboro').—No. 1 sample is a very good honey indeed, light in colour and good on all points. No. 2 is of good medium colour and pronounced flavour that many users would like. No. 3, besides being dark in colour, is deteriorated by an admixture of honey dew.

A. WAKERELL (Croydon).—Your sample is fairly good honey, spoilt with an admixture of honey dew.

A. Z. DANIEL (Wharfedale).—Your sample is almost wholly honey dew, and as such is quite unsuitable for table use.

Suspected Combs.

J. T. H. (Saltash).—Samples 1 and 3 show chilled brood only, but there may, of course, have been other combs in the respective hives affected with disease. In Nos. 2 and 4 foul brood of old standing is seen in very pronounced form.

Editorial, Notices, &c.

FOUL BROOD LEGISLATION.

As promised on page 381 of last week's issue, we print below the Bill promoted by the Council of the British Beekeepers' Association in 1896 and that now being brought forward by Mr. G. Saunders for comparison with the original, the two Bills being referred to respectively as "Bill of 1896" and "Bill of 1904."

While giving the full text of both Bills, the words printed in italics are those in which alterations have been made in one or the other. It will also be observed that in Clause 3 some paragraphs in the Bill of 1896 have been transposed to other positions in that of 1904.

BILL OF 1896.]

DRAFT OF A BILL

FOR THE

BETTER PREVENTION OF BEE PEST.

Be it enacted by the *Queen's* Most Excellent Majesty by and with the advice and consent of the Lords Spiritual and Temporal and Commons in this present Parliament assembled, and by the authority of the same, as follows:—

1.—In and for the purposes of this Act the word "infected" means infected with the disease known as Foul Brood, or Bee Pest; *and* the word "premises" includes lands and buildings.

2.—Every Local Authority empowered to execute "The Diseases of Animals Act, 1894," shall have power to execute and enforce the provisions of this Act.

A local authority may (without prejudice to their powers of delegation under any other Act) resolve that the provisions of the Fourth Schedule to the Diseases of Animals Act relating to Committees of local authorities shall apply for the purposes of this Act, and thereupon the said provisions shall apply accordingly.

Any expenses incurred by a local authority in the execution of this Act shall be defrayed in the same manner as the expenses of such local authority under the Diseases of Animals Act.

3.—For the purpose of executing and enforcing the provisions of this Act, a local authority may, by a warrant in the form in the Schedule to this Act, or to the like effect, authorise a person qualified *by his knowledge of beekeeping (in this Act referred to as a bee expert)* to exercise the powers exercisable by authorised bee experts under this Act.

Any such warrant shall extend to the whole or to such part as shall be therein specified of the *district* of the local authority, and shall continue in force for the

BILL OF 1904.]

DRAFT OF A BILL

FOR THE

BETTER PREVENTION OF BEE PEST.

Be it enacted by the *King's* most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:—

1.—In and for the purposes of this Act, the word "infected" means infected with the disease known as Foul Brood, or Bee Pest; the word "premises" includes lands and buildings, *and the word "hive" includes any receptacle for bees.*

2.—(1) Every Local Authority, *in England and Wales and Ireland,* empowered to execute "The Diseases of Animals Act, 1894," shall have power to execute and enforce the provisions of this Act *within the area of that Authority, and the expression "Local Authority," shall be construed accordingly.*

(2) A Local Authority may (without prejudice to their powers of delegation under any other Act) resolve that the provisions of the Fourth Schedule to the "Diseases of Animals Act, *1894,*" relating to Committees of Local Authorities, shall apply for the purposes of this Act, and thereupon the said provisions shall apply accordingly.

(3) Any expenses incurred by a Local Authority in the execution of this Act shall be defrayed in the same manner as the expenses of such Local Authority under the "Diseases of Animals Act."

3.—(1) For the purpose of executing and enforcing the provisions of this Act, a Local Authority may authorise a qualified person *or qualified persons* to exercise the powers exercisable by authorised bee experts *or instructors in bee-keeping* under this Act.

(2) *Any such authorisation* shall be sufficient if *made* by warrant in the form in the schedule to this Act or in a form to the like effect purporting to be signed by the

BILL OF 1896.]

period (not exceeding *five* years) therein limited, but may at any time be revoked by the local authority.

*A local authority may, if they see fit, grant warrants to more than one bee expert.**

A warrant shall be sufficient if purporting to be signed by the Clerk of the local authority, without being sealed, and shall not be subject to any stamp duty.

4.—An authorised bee expert under this Act shall have the following powers and duties:—

(i.) He may enter any premises whereon he may have reasonable grounds for supposing that bee pest exists, or has within 14 days existed, and may examine any stock or colony of bees, or product of bees, or any hive or appliance for bees which he may find thereon;

(ii.) He shall exercise and perform such powers and duties as may be prescribed by bye-laws of the local authority.

Any person who obstructs any authorised bee expert in the exercise of his powers, *or who fails to comply with an order under this section*, shall be liable to a fine not exceeding *five* pounds.

5.—A local authority may make bye-laws—

(i.) For *requiring notice* of the existence of bee pest *infection* to be given to the local authority;

(ii.) For prescribing and enforcing the isolation and treatment of infected stocks or products of bees;

(iii.) For prescribing and regulating the destruction of any infected stock or colony or any infected product of bees, and of any infected hive or *other receptacle* for bees, and the payment by the local authority of compensation for such destruction, the compensation for any stock or colony of bees not to exceed ten shillings;

(iv.) For prescribing and enforcing the cleanliness and disinfection of hives or other *receptacles* for bees;

(v.) Generally for the better prevention of bee pest.

Such bye-laws may impose penalties not exceeding, in any case, five pounds for any breach of them, and shall be of no

* This is included in Clause 3 of 1904 Bill.

BILL OF 1904.]

Clerk of the Local Authority, without being sealed, and shall not be subject to any stamp duty.

(3) Any such warrant shall extend to the whole or to such part as shall be therein specified of the *area* of the Local Authority, and shall continue in force for the period (not exceeding *five* years) therein limited, but may at any time be revoked by the Local Authority.

4.—(1) An authorised bee expert *or instructor in bee-keeping* under this Act shall have the following powers and duties:—

(*a*) He may enter any premises whereon he may have reasonable grounds for supposing that bee pest exists, or has within fourteen days existed, and may examine any stock or colony of bees, or product of bees, or any hive or appliance for bees which he may find thereon;

(*b*) He shall exercise and perform such powers and duties as may be prescribed by bye-laws of the Local Authority.

(2) Any person who obstructs any authorised bee expert *or instructor in bee-keeping* in the exercise of his powers shall be liable to a fine not exceeding *two* pounds.

5.—(1) A Local Authority may make bye-laws—

(*a*) For *prescribing the mode of notification* of the existence of bee pest to be given to the Local Authority;

(*b*) For prescribing and enforcing the isolation and treatment of infected stocks or products of bees;

(*c*) For prescribing and regulating the destruction of any infected stock or colony or any infected product of bees, and of any infected hive or *appliance* for bees, and the payment by the Local Authority of compensation for such destruction, the compensation for any stock or colony of bees not to exceed ten shillings;

(*d*) For prescribing and enforcing the cleanliness and disinfection of hives or other *appliances* for bees;

(*e*) Generally for the better prevention of bee pest.

(2) Such bye-laws may impose penalties not exceeding, in any case, five pounds for any breach of them, and shall be of no effect unless and until confirmed *in Eng-*

BILL OF 1896.]

effect unless and until confirmed by the Board of Agriculture, but shall not require confirmation by any other authority.

Any bye-law of a local authority may be proved by the production of a copy of the bye-law purporting to be certified by the clerk of the local authority as a true copy, and a bye-law so proved shall be taken to have been duly made unless and until the contrary is proved.

6.—Any person who knowingly removes from his premises, or sells or disposes of to any other person, any infected bees, or any infected product of bees, or any infected hive *or other receptacle* or appliance *used* for bees, shall be liable to a fine not exceeding, for the first offence, *five* pounds; and for the second or any subsequent offence, *ten* pounds.

7.—All offences under this Act or any bye-law made under this Act may be prosecuted, and fines may be recovered by the local authority, or any bee expert appointed under this Act, in a summary manner *before a Court of* Summary Jurisdiction.

8.—This Act may be cited as "The Bee Pest Prevention Act, *1896.*"

BILL OF 1904.]

land and in Wales by the Board of Agriculture *and Fisheries, and in Ireland by the Department of Agriculture and Technical Instruction for Ireland,* but shall not require confirmation by any other authority.

(3) Any bye-law of a Local Authority may be proved by the production of a copy of the bye-law purporting to be certified by the Clerk of the Local Authority as a true copy, and a bye-law so proved shall be taken to have been duly made unless and until the contrary is proved.

***6.**—*Where a person having in his charge any bees, hive, or hives, has become aware that such bees, hive, or hives are or is infected, he shall forthwith give notice in writing thereof to the Local Authority; and if he fails to give such notice he shall be liable to a fine not exceeding, for the first offence, two pounds; and, for the second or any subsequent offence, five pounds.*

7.—Any person who knowingly removes from his premises, or sells or disposes of to any other person, any infected bees, or any infected product of bees, or any infected hive or appliance for bees, shall be liable to a fine not exceeding, for the first offence, *two* pounds; and, for the second or any subsequent offence, *five* pounds.

8.—All offences under this Act, or any bye-law made under this Act, may be prosecuted, and fines may be recovered by the Local Authority, or any bee expert *or instructor in bee-keeping* appointed under this Act, in a summary manner, *as provided by the* Summary Jurisdiction *Acts.*

9.—*This Act shall not extend to Scotland.*

10.—This Act may be cited as "The Bee Pest Prevention Act, *1904.*"

* NOTE.—This Clause is not necessary; a similar one being struck out of the Bill of 1896 on the recommendation of the Board of Agriculture as being superfluous, the local authority having power to make bye-laws under Clause 5.

REVIEWS OF FOREIGN JOURNALS.

By "Nemo."

In *L'Abeille de l'Aisne*, C. P. Dadant alludes to the illustrated postcards brought out by the Bee-keepers' Society. He says they are charming, and thinks they will certainly stimulate the sale of honey. For this purpose they must be produced in large quantities. It is certainly a good idea to encourage. There is nothing better or wholesomer than honey, and it is only necessary to bring it within the reach of all, and he thinks these cards are useful to draw the attention of the public to honey. (We have received samples of these pretty postcards and were very pleased with them, but on making inquiry we found the price would be too great to make them generally useful.—EDS. B.B.J.)

In *Schweizerische Bienenzeitung*, a writer says that on May 28 last year he had a second swarm weighing about three pounds. At the beginning of July, that is five weeks after the swarm had been hived, he was astonished to find a large number of eggs in the cells, but not a single larva. Ten days later the hive was again examined

with the same result, plenty of eggs, some cells even containing two to five, and there was also brood-food in some of the cells, but not a single egg had hatched. The queen, although of exceptional size and beauty, only laid sterile eggs.

In *Elsass-Lothringischer Bienen-Zuchter*, Ch. Zwilling gives an infallible method of getting rid of ants, which are often troublesome in an apiary. Make a hole in the ants' nest with a stick, and drop into it a piece of camphor about the size of a filbert, and then close the hole. After a few days it will be seen that all the ants have deserted the nest, for the smell of the camphor, which gradually permeates the ground, is obnoxious to them, and they get as far away from the odour as possible. To get rid of them from hives, the walls, floor-board, stands, and all parts where ants are likely to run over should be rubbed with a cloth in which a piece of camphor has been wrapped, or the cloth may be moistened with camphorated spirit. At the end of a week there will be no more ants.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[5648.] Mr. Watts (5636) inquires how to keep comb honey in a liquid condition. I am sorry I cannot enlighten my brother in the craft on this matter. My section-honey is generally as good and clear in the spring of the following year as when taken from the hives, though this same honey, if extracted, would be solid in two or three weeks. The reason for this I cannot explain, unless it be that the action of the air on the honey converts it into granules or crystals when extracted. Sections for long keeping are selected from my best quality honey, and I note that even if the honey is not quite sealed over in the cells it keeps just as clear as when fully sealed. All sections are carefully stored in a dry upstairs room four or five layers high, on strong shelves at the back of the kitchen chimney, and in very severe weather a thirty candle-power "Martin" lamp is occasionally placed in the room to warm it thoroughly. The present season is the worst I have known for the early granulation of comb-honey. Every season we get a few solid sections about Christmas time, but this year, at the end of September, we have quite a quantity fit only for the melting-pot.

Bee-keeping in Abingdon.—I cannot give your inquiring correspondent any definite advice as to the Abingdon district for honey producing, but I believe there is good bee forage at a short distance from the town. I knew a bee-keeper there a few years back who had, as he called it, "good luck" every year with his bees—since then he has removed into the town of Abingdon, and between neighbours and sparrows has been obliged to discontinue bee-keeping.

Foul Brood Legislation.—Our friend "D. M. M.," in last week's "Notes," has pointed to a possible source of foul brood from a distance. Is there any clause in the Foul Brood Bill to prevent the importation of the disease from foreign parts? Provision is made for the destruction of our local sources of infection if in hives of straw or wood, but there is no mention of those other possible hot-beds of disease, such as church roofs, chimneys, roofs of houses, hollow trees, etc. Of what use will it be to burn the straw skep in the vicar's garden, and omit the burning out of the stray colony in the roof of his church close by? The latter stock is as likely to be suffering from the pest as the former. As regards the value of a diseased stock of bees, mentioned by Col. Walker and suggested for adoption in the editorial article last week, 5s. is quite as much as it is worth, possibly far more, but the small sum of 5s. will not purchase a swarm to restart our bee-keeper again, and if he is not able to purchase a new swarm, I fear we shall extinguish bee-keeping in many instances. However, as our next few numbers will be somewhat crowded with the texts of the Foul Brood Bills and reports of the Conference, I will conclude with the hope that something definite will result therefrom, for the good of bee-keeping in the future.—W. Woodley, Beedon, Newbury.

HONEY IMPORTS, 1891-1903.

[5649.] The remarks of our friend "D. M. M." in the issue of September 15 on the "Imports of Honey" are very interesting and suggestive. Before they had appeared I had put together the enclosed particulars of imports for the year 1903, as values are constantly fluctuating. I have given prominence to the weights imported and the price per lb. of the declared value. Since then I have looked into the question of the source of supply, and it is curious to observe how greatly that has

shifted within the term mentioned by "D. M. M." The Board of Trade returns to which I have access go back to 1891, and from them is taken the following tables :—

PARTICULARS OF IMPORTS OF HONEY DURING 1903.

	Cwt.	Declared value. £		Price.
Germany	322	450	price per lb.	2 994
France	1,642	4,448	,, ,,	5·804
Italy	212	334	,, ,,	3·375
U.S.A. Atlantic	2,413	2,935	,, ,,	2·607
,, Pacific	813	1,228	,, ,,	3 236
Peru	540	513	,, ,,	2 035
Chile	4,435	4,507	,, ,,	2·179
Other foreign countries	614	750	,, ,,	2·617
Total foreign	10,991	15,166	average per lb.	2 956
Australia	4	10	price per lb.	5 357
Canada	177	371	,, ,,	4·491
West India Islands	11,529	13,834	,, ,,	2·571
Other British Possessions	570	968	,, ,,	3·639
Total British	12,280	15,183	average per lb.	2·649
Total imports	23,271	30,349		

by our own possessions in the West Indies. In '91 they sent us only 1,614 cwt. at 36s. 8d. per cwt.; last year we received our largest supply from that source—viz., 11,529 cwt. at 23s. 11½d. The Chilian supply has fluctuated greatly, and seems falling in 1892, and again in 1901 they sent us 11,700 cwt., but last year only 4,435 cwt. at 20s. 9d. Australia, owing to drought, has nearly dropped out of the return. The point that I would call attention to is that at a wholesale price of 6d. per lb. we ought, and can, compete with foreign honey, and that there is no need to go below that price for a sound article. —T. I. Weston, Hook, Winchfield, Hants.

ITALIAN BEES AND FOUL BROOD.

HOW QUEEN-BREEDERS MAY HELP TO PREVENT THE DISEASE.

[5650.] The experience of your correspondent, "D. M. M.," with foul brood in

HONEY IMPORTS, 1891-1903.

	France		U.S.A.		Spanish W. Ind.		Chili.		Australasia.		British W. Ind.	
	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£
1891	1,216	4,009	8,118	14,435	5,385	8,365	5,099	7,708	619	1,285	1,614	2,056
1892	1,411	4,906	3,447	6,392	7,374	9,774	11,747	16,837	1,691	3,083	1,948	3,328
1893	1,290	2,647	3,668	6,817	3,418	3,490	5,324	8 031	672	1,427	1,423	2,226
1894	929	2,225	6 083	10.769	—— Ceased ——		7,218	8,468	1,005	1,639	2,054	4,378
1895	974	2,538	7,131	13,770	CANADA.		8,293	10,787	3,602	5,559	2,146	3,335
1896	1,151	3,227	7,087	11,013	70	272	6 177	7,235	707	1,267	1,233	1,881
1897	1,101	2,755	3,961	6,389	41	75	3,596	3,899	1,114	976	1,834	3,041
1898	890	2,430	5,521	7 516	921	2 029	6,378	6,920	1,966	1,991	2,262	2,817
1899	1,090	2,737	3,470	6,468	1,177	2 147	4,395	6,612	1,167	1,597	3,593	4 971
1900	1,188	2,958	4,802	8 662	500	934	5,181	6,586	569	828	3,427	5,204
1901	1,245	2,856	5,722	9,110	123	222	11,728	13,700	1,116	1,381	9,168	12,736
1902	1,157	3.129	4,941	7,542	153	316	3 702	3,689	38	48	8,470	10,375
1903	1,642	4,448	3,226	4,164	177	371	4,435	4,507	4	10	11,529	13,834
1891	65/11 cwt.		35/6½ cwt.		67/8 cwt.		30/2 cwt.		41/6 cwt.		36/8 cwt.	
1903	54/2 ,,		25/9 ,,		42,0 ,,		20/9 ,,		50/0 ,,		23/11½ ,,	

Total Imports, 1891, 23 541 cwt. Total Imports, 1903, 23,271 cwt.

From the above we can gain the great encouragement that, in spite of a great increase in population and a great decrease in price to stimulate consumption, yet the quantity imported has not increased.

France sends us yearly about the same quantity of the best quality honey. The United States have declined from 8,000 cwt. to 3,000 cwt., and in price from 35s. 6d. to 25s. 9d. Canada began to show in the returns in 1896 with 70 cwt. at the high price of 67s. 8d., increased to 1,177 cwt. in 1899, and has now fallen off to 177 cwt., prices here having fallen too low to please the producers, who can find a market for all their best quality at home. The Spanish West Indies, which in 1891 sent us 5,385 cwt., ceased sending in 1894, owing doubtless to the rebellion and internal troubles. We do not seem to have had imports from there since, the vacancy thus caused having been more than filled up

Italian stocks headed with queens imported from Italy must, I think, be very rare. Mine has been quite the reverse. During the past eight years I have always kept a few pure Italian stocks in my apiary headed with pure Italian queens imported from Italy, and must have introduced over a hundred of these queens, and not one of them developed foul brood. A still larger number of these queens have passed through my hands en route to other bee-keepers during this time, but I do not remember having received more than one report of foul brood from their stocks, and in this case the disease was not noticed until a whole season had passed, and it seems reasonable to suppose that infection might have been obtained from a local source.

In "D. M. M.'s" cases the disease also appears to have been first noticed some time after the introduction of the Italian

queens, and is it not possible that here, too, infection was obtained by robbing, Italian workers being often very keen robbers? Although there has been no case of foul brood among pure Italian bees in my apiary, the evidence of others shows that Italians are certainly subject to disease as well as blacks.

Foul brood is so prevalent in this country that there would soon be no healthy bees at all did not bees possess a large amount of natural immunity, which doubtless differs in degree in various races and strains. Although I have been unable to observe for myself the susceptibility to disease of pure Italians compared with that of ordinary blacks, I have made observations, with interesting results, with regard to the disease-resisting power of different strains of black-Italian hybrids compared with one another and with the ordinary black bee. Some years ago an outbreak of foul brood occurred in my apiary, and was traced to robbing from a neighbour's hives in which the bees had died of disease. This was after I had come to the conclusion that a cross between blacks and Italians seemed to be a more promising bee for general usefulness than pure bees of any race that I had tested; and, with the exception of a few colonies of various pure races and ordinary blacks, all my colonies were black-Italian hybrids of selected parentage, some of them having much more Italian blood (which was chiefly of American origin) than others. I kept careful record of the various cases, of which there were a large number in an incipient stage, and a conclusion unmistakably arrived at was that the hybrids that had more Italian blood were less subject to the disease than those that were darker. By breeding from those that had never shown any trace of the disease I endeavoured to introduce increased disease-resisting power into my strains. One of these queens was introduced into a diseased apiary of black bees on the coast of Co. Sligo, and her progeny showed very marked disease-resisting power, which continued after crossing with the local strain, and now they are the only bees left in the apiary.

If queen-breeders could obtain success similar to that which has attended the work of breeders of disease-resisting potatoes, which has, I believe, been carried on on similar lines, it would indeed be worth any amount of patient labour.

In considering this matter, it is important to remember that in diseases like foul brood there are different "strains" of the disease that vary in virulence, and these do not produce the same effects under the same conditions.

I have lately been watching some very interesting cases of nuclei and colonies containing abnormal drone brood produced by fertile workers or by a queen that failed to get fertilised, and which developed sooner or later symptoms similar to those of foul brood, the nuclei and colonies in the rest of the apiary being apparently perfectly healthy. In the half-dozen or so cases that have been observed during the past two or three years, the disease was cured by the insertion of a normal fertilised queen, and did not spread to other hives. In one case worker brood which occurred mixed with the drone brood was slightly affected, but this case recovered like the rest.

If these were really cases of foul brood of low virulency, which, however, has not been proved by bacteriological examination, they serve as a further illustration of the theory that infection is much more widely spread than is generally supposed, and that, to speak in a popular way, were it not for the constant and successful war the systems of our bee-larvæ are waging against the disease, the majority of us would have it to-day in virulent form in our apiaries. Similarly, we ourselves are always warding off and rendering innocuous the deadly consumption bacillus which is practically omnipresent.

In my dealing with incipient foul brood, although I found syrup medicated with naphthol beta to be most helpful when conditions were unfavourable for honey-gathering (e.g., in April and part of May), and that it held the disease well in check, conditions associated with good bee weather and a good honey-flow I found to be still more helpful, and under these alone the disease disappeared in many hives. All my observations, taken together, pointed to favourable summer conditions, together with the introduction of vigorous hybrid Italians, in which Italian blood predominated, as the best means of combating the disease.—F. W. L. Sladen, October 1.

THE HONEY HARVEST IN SUFFOLK.

[5651.] The following report of the honey harvest obtained from one apiary in Suffolk, was not included in the notes I sent in the earlier part of the month, and printed in B.B.J. of Sept. 8 (page 355), as the work of extracting was not completed when I called at the apiary from which this emanates. I append the total amount of honey and wax extracted, and quantities taken from some of the best stocks:—

Number of hives at close of season, 60; total yield of honey, 3,471 lb.; beeswax from cappings and damaged combs, 60½ lb.; average yield of honey per hive, 5,785 lb.; four hives yielded, respectively, 139 lb., 136½ lb., 126½ lb., and 125½ lb.; three hives yielded between 90 and 100 lb.

each, seven between 80 and 90 lb., eight between 70 and 80 lb., and eight between 60 and 70 lb. The number of stocks has increased about 30 per cent. during the season. The bees are of the Ligurian-English cross, which undoubtedly shows the usefulness of this strain in the excellent result of the season's work. The owner of the apiary is a member of the Essex and Suffolk B.K.A., and an enthusiastic lover of bees, who obtains great pleasure in devoting so much of his time to the study and practical management of his favourite hobby, bee-keeping.—A. W. SALMON, Expert, Essex and Suffolk B.K.A., Chingford, October 2.

FOUL BROOD LEGISLATION.

[5652.] With reference to foul brood legislation, I would like to say a Bill for obtaining compulsory powers has much to commend it, and cannot fail to result in benefits to industry as a whole. It is illogical to condemn it because the Canadian effort has proved abortive, inasmuch as the British conception of the pest differs from theirs in the vital point of requiring the disinfection of the hive. To illustrate the need for the Bill, I may give the case of two thoroughly good, up-to-date bee-keepers who have for years been trying to stamp out the disease, but each spring brings a recurrence, and why? A skeppist located a hundred yards away, whose bees are known to die in one or more skeps not infrequently, and without any examination, the skeps are again used for swarms. The inference is that foul brood is generated in the skeps referred to, and a forced examination, and, if found affected with foul brood of long standing, destruction, with compensation, must be a help to the skeppist, while it would be a safeguard to the others.—ALBERT SANDYS, Abingdon-on-Thames.

BEE-KEEPING IN SOUTH AFRICA.

[5653.] You will see by the address at foot that I have left "Bog Farm," and am now at Perseverance Station, where we have an extensive farm of twelve thousand acres, and go in for irrigation largely for growing vegetables. We have on the farm, with two large windmills and a sixteen horse-power oil engine, a large dairy of cows, pigs, poultry, 500 sheep, a lot of ostriches; also, of course, my old hobby, the bees. I have shifted the hives here, and hope to get better results here than at Bog Farm, as we now have acres of "gwarry" and speckoon growing about, with bush-plants, which produce honey. Some few months ago we started a Cape Colony Bee-keepers' Association, with its headquarters at Port Elizabeth, and our membership is increasing. The subscription is 10s. per year for membership. We collected amongst the members £7 at our last meeting for a set of the B.B.K.A. lantern-slides on bees and bee-keeping, and would like you to obtain them for us. I told them I thought the price would be about the above amount. Please get the most up-to-date ones, including those on foul brood. Should also like a syllabus for lecturing, as this duty has fallen on myself. Now, as you know I have had a good experience in speaking on bees in the bee-tent, but I have never used lantern-slides, so will be glad if you will give me all particulars, and a few hints how to proceed. I notice the controversy re foul brood in B.B.J. for some time past. We have nothing in that line here, and, judging by what I have seen and heard in the past of it at home, I hope we shall be able to keep it out; but there is nothing to prevent any one sending stocks, and they might be diseased. What regulations do you advise in the matter? I am in touch with the Agricultural Department, but that Department is rather backward regarding bee-keeping, but is anxious for the progress of the same. With regards to all old friends—J. MARTIN, Wagon Drift Farm, Perseverance Station, Dist. Uitenhage, August 27.

[We are glad to hear of the progress you appear to be making in the land of your adoption, and will cheerfully do our best to fill requirements as stated above, and forward when ready. With regard to foul brood legislation, you will no doubt find some useful information in Report of the Conference of Bee-keepers on the subject which will, in due course, appear in our pages.—EDS.]

WEATHER REPORT.

WESTBOURNE, SUSSEX,

September, 1904.

Rainfall, 2·20 in.	Minimum on grass, 32° on 30th.
Heaviest fall, ·53 on 30th.	Frosty nights, 0.
Rain fell on 14 days.	Mean maximum, 63·1.
Below average, ·09 in.	Mean minimum, 47·3.
Sunshine, 181·3 hours.	Mean temperature, 55·2.
Brightest day, 5th, 11·8 hours.	Below average, 0·2.
Sunless days, 2.	Maximum barometer, 30·27 on 18th.
Above average, 0·8 hours.	Minimum barometer, 29·67 on 14th.
Maximum temperature, 70° on 5th.	L. B. BIRKETT.
Minimum temperature, 37° on 30th.	

Queries and Replies.

[3581.] *Foul Brood and "Robbing."*—On September 26, being a warm day, I thought I would have a look at the bees, and to my great surprise on arriving where my hives are located, I thought the bees had all gone mad! The air all round was full of bees, as if two or three of the hives were about to swarm, but on going closer it seemed as if they were engaged in robbing one another. However, on closer inspection I found that was not the case, but the bees were busy coming home in scores loaded, and the entrances being reduced in width to about one inch, it was impossible for so many bees as were flying to get in and out. I therefore watched to see from what direction they were coming, and followed the line of flight to a cottage in which the housewife was busy in her washhouse. On coming to the place, I asked what was the matter in her kitchen to cause such numbers of bees to be passing in and out. She made a rush for the place, but it was so full of bees she was too frightened to enter. On further inquiry, I found that they had driven several stocks of bees from skeps two days before at a place about three miles away, and had on the morning of my visit brought the combs of honey home and put the lot on the kitchen table. She had then gone about her washing, thinking nothing more about the pile of sweets left exposed. But the result was that the whole of the bees in the neighbourhood were in for a "free feed all round." I volunteered to cover it up and save further mischief. But the first thing I saw was that the combs contained foul brood, and lost no time in advising burning or putting it away in order that no bees could get at it. I might, however, as well have talked to the walls! It seemed to only cause amusement to think of destroying the honey. Anyway, I brought away a piece of comb which I enclose (marked No. 1) for your inspection, that I may have something from greater authority than myself.

During the time I was there a neighbouring bee-keeper—whose bees are about two miles away from my own—called, and, on hearing me telling about foul brood, he asked me to look at his bees. Now, I happened to know that everything this neighbour had in the bee line was new this season, as I wired the frames for him, and got the hive ready, and advised him generally on what to do in managing the bees. So I went to his place as requested, and found no less than six frames affected. The other piece of comb sent (marked No. 2) is also sent along for your decision, as the owner can hardly believe that there is anything wrong. But I ask: How is it possible to keep foul brood down with such carelessness all round? I send name for reference, and sign myself—NOVICE, Plymouth.

REPLY.—Both samples of comb sent are affected with foul brood of old standing. Such incidents as are described above, if unfortunate—as they undoubtedly are—impart a useful lesson to those who go on bee-driving expeditions. It should be the very first item for consideration, when starting to drive bees, to ascertain as far as possible if the stock to be operated on is healthy or diseased, and if pronounced foul brood is found, the job should be given up for that day at least, if not entirely.

[3582.] *Varying Colour of Comb-Cappings.*—I shall be much obliged if you will give me some information on following points:—1. The comb-cappings on some of my sections vary in colour. Some parts of a section is capped beautifully white, while next to it there is a patch much darker in colour. What is the cause of this? 2. In extracted honey (heather) I have always a lot of air-bubbles, and this, I think, spoils it for show purposes. What is the best way of getting rid of these bubbles? I send name, etc., and sign—HIGHLANDER, Lochgilphead, September 27.

REPLY.—The colour of comb-cappings vary according to the source from whence honey is being gathered at the time. For instance, cell-cappings from clover honey are about milk-white in colour, and from heather whiter still; but in districts where sainfoin is grown in quantity the capping is yellow. On the other hand, sections from the early fruit-bloom have dark cappings. In your case we should say the "patches" of dark cappings among the white are caused by the cells being sealed over at different times. 2. There is no method we know of for ridding pressed heather-honey of air-bubbles, which in other kinds rise to the surface. The honey from "ling" (Calluna vulgaris)—the true heather of Scotland's hills—is too dense to allow the passage of air-bubbles to the top. Competent judges at shows are aware of this, so the honey is not "spoiled for show purposes" as you suppose.

[3583.] *Queen-Rearing.*—Being a subscriber to the B.B.J., I ask if you will kindly tell me what is best to do under the following circumstances:—I have four young Italian queens hatched September 1 or 2, and as yet neither of them has commenced to lay. Since then the weather has been for the most part beautifully warm, with a temperature up to 68 deg., or at times 70 deg. Fahr. On the 11th I saw one queen return to her hive, while plenty of drones were flying at the time. They appear to be rather small queens. A day or two ago

I examined one hive; the queen was there all right, but showed no sign of laying, neither was there any brood, and so I ask: 1. Will these queens be of any use? If they had fertilised would they not have commenced laying before now? I have kept on stimulating so as keep them active. Now the one colony is killing its drones (Italians). I have watched these latter carefully; they do not appear to fly far from their hive at this time of year, and lingering on the alighting-board a long time before starting lofty. 2. Am I right in supposing that if I kept these queens till spring, and they have not laid in the autumn, they will either become "drone-breeders" or else not breed at all. I feel disposed to kill them and unite their colonies to others, and not risk further disappointment. I send name and sign—ITALIAN, Worcester.

REPLY.—1. If the queens are safely mated they should certainly start egg-laying before settling down for winter. Otherwise we doubt their being fertilised. Try them for a short time longer, because the second week in September is very late for queen-rearing, and the chances for safe mating are very few. 2. We should regard the queens as worthless for next year if no eggs at all are laid previously.

[3584.] *Uniting Bees.*—Will you kindly inform me if it is practicable to unite a queenless, broodless stock to a strong nucleus by placing brood-box of the former on top of the latter with a piece of mosquito netting between them for a few days? I object to the "flouring" method on account of mildew. Both stocks are closed up to five frames.—J. W. L., Cumberland.

REPLY.—It is, of course, quite practicable to unite as proposed, and there may be no fighting when netting is removed; but we should ourselves prefer the "flouring" plan. Why you should fear "mildew" as being likely to result from dusting with flour we cannot say, but no such mischief has ever followed on our practice of flouring. An alternative plan to using mosquito netting between the stocks would be the use of brown paper between, with a few small holes made in the latter. The bees will in course of a few days enlarge the holes by gnawing paper, and thus allow gradual intercommunication without fighting.

[3585.] *Suspected Queenlessness.*—On examining one of my hives just brought home from the heather, I was surprised to notice several drones on comb along with bees. I could not find any queen, but this was not an easy job, as hive was a very strong colony. The bees, however, have been carrying in pollen abundantly during last two or three days. Do you think the stock is queenless, as there is no brood? Your reply will greatly oblige. I send name for reference, and sign—TOGO, Ayrshire.

REPLY.—The presence of drones at this late period of the year is suspicious, to say the least, and, along with busy pollen-carrying, suggests loss of queen at the moors, and—on the part of the bees—an effort to replace the loss. The question can only be settled by an examination of combs for queen or eggs.

[3586.] *Making Artificial Swarms.*—Will you kindly inform me in your next number of the B.B.J. if there is anything wrong with the queen sent? She was reared this season by an artificial swarm; but on examining the hive I find only a tiny patch of brood and no eggs or young larvæ. I have another queenless lot, so have united the two, and am introducing a fertile queen, as I think this one cannot be a good one; but I should be much obliged to receive your opinion on her.—L. W. E., King's Lynn, September 28.

REPLY.—Except for being a little under sized, there seems nothing wrong with queen sent. On the other hand, we do not quite know what plan of artificial swarming was followed by which the "swarm" raises the queen. According to rule, the queen goes with the swarm when taken from the parent hive.

[3587.] *Feeding Bees Up for Winter.*—A reply to the following questions will oblige: 1. Is it too late to feed up with syrup now? 2. If feeding entirely on candy for the winter, how much should be given to each stock? 3. Which recipe for making candy is the best for winter use—Nos. 2, 3, or 4 in "Guide Book"?—H. S., Ockley, Surrey, September 27.

REPLY.—1. If syrup-food is given warm, and in a good rapid-feeder (a wooden one), the bees will take it down readily while weather keeps warm. 2. Bees should never have to depend entirely on candy for winter-food, it is very unsafe; but if there is no help for it give large 2 lb. cakes of very soft candy, and renew as often as needed. 3. No. 2 is most suitable.

[3588.] *Buying Second-hand Hives.*—Several months ago I wrote you asking for information as to bee shows, and you kindly referred me to the B.B.J., which I now take regularly, and find in it much that is extremely useful. I have attended several shows, and have learned a little on each occasion. I am now studying the "Guide Book" with a view to starting bee-keeping in the spring of next year. I consider it a most valuable work, and beg you will accept my sincere thanks for the help it has already been to me, and which will be valuable later on when I commence

the practical part. I shall now esteem it a great favour if you will advise me as to the following:—I notice in the B.B.J. some hives advertised for sale, and if they are in good condition and complete, they will be cheap at the price asked even after paying carriage, but am in a quandary as to payment, for, of course, I want to be satisfied with goods before parting with cash. I am told that the B.B.J. undertakes this sort of business on the "deposit" system, as in the "Exchange and Mart," but I am doubtful about it, as I have never read of same in the B.B.J. Will you, therefore, kindly inform me if there is a medium for this business through your office?—W. E. C., Kent.

REPLY.—In purchasing second-hand hives it is most important to know that they have not been occupied by bees affected with foul brood, and in consequence we advise your requiring a guarantee that the hives are free from risk of this kind. In your case, also, it would be well to buy on the "deposit" system (which is in use at this office), and have one hive sent for approval before taking the others. Should you so decide, send cash here, and we advise its receipt to seller, who then forwards goods to you for approval.

Bee Show to Come.

October 20 and 21, at Kilmarnock.—Honey Show in connection with the Ayrshire Agricultural Association. Eleven classes. Liberal money prizes. Schedules from John Howie, Secretary, 58, Alloway-street, Ayr.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased or replies giving such information can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

*** A lady bee-keeper, dating from "near Great Yarmouth," writes:—"Do you know of an expert near here who could give me advice concerning my bees? I am anxious about one hive, and only just commencing bee-keeping. I feel rather at a loss." We will be glad if any reader can render the help needed, and will send on his address, which will be duly forwarded.

*** MR. ALBERT SANDYS, Drayton, Abingdon-on-Thames, kindly writes as follows:—"In reply to your correspondent, whose request appears on page 380, I beg to say that Abingdon-on-Thames is situated in a purely corn-growing district, and as such must be ranked as only a moderately-good one for bee forage."

E. DREW (South Woodford).—The Bee and its Sting.—We had already seen Mr. H. O. Morgan's correction of the statement made in an evening paper regarding the bee taking no harm for the loss of its sting. But, seeing that all bee-keepers are well aware that the loss of its sting means death to a bee, we thought it hardly needs to ask for opinions on the subject in our pages.

F. W. ALLEN (Oxford).—Taking Bees from Granary.—Much obliged for photos, but they are not suitable for tone-blocks.

A. B. C. (Hitchen).—"Homes of the Honey Bee."—Please send photo along, and if suitable for a tone-block we will be glad to insert it in our "Homes" pictures.

A BEGINNER (Olney).—Moving Bees 20 ft.—The hives and bees may be safely moved a yard or so on each day weather is fine and bees are flying freely.

Honey Sample.

G. R. (Howden).—Honey sent is quite wholesome, and therefore "fit for table use"; but its flavour is far from nice, and in consequence it is a question of the consumer caring to partake of it.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul Brood."

We urgently request that all letters sent with samples of suspected comb be put outside the tin or box containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.

In urgent cases (and where possible) we undertake to "wire" replies as to F.B. if six stamps are sent to cover cost of telegram. All letters should be addressed "Editors," not "Manager."

FRED (Burwash).—Comb contains pollen only.

O. HOPE (Welwyn).—Sample sent contains nothing but honey in capped cells. No trace of either brood or pollen.

NOVICE (Kirkcudbrightshire).—Bad case of foul brood in advanced stage. From what you say about foreign bees, it looks as if the disease had been imported with them.

F. H. (Welwyn).—Comb is affected with foul brood, not in the early stage, but in pronounced form.

NEMO (Ayrshire).—There is no trace of brood at all in comb, which contains only honey and pollen.

J. A. B. (Dundee).—There are slight signs of foul brood—in two cells only—of your sample; rest of brood seems normal, and nearly all ready to hatch out.

**** Several Letters and Queries are unavoidably held over till next week for lack of space.*

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

CONFERENCE WITH COUNTY DELEGATES ON FOUL BROOD LEGISLATION.

In accordance with the notice issued by the B.B.K.A., a meeting of representatives of county bee-keepers' associations was held at 105, Jermyn Street, on Thursday, October 6, at 4 p.m., to discuss the question of promoting legislation for the better prevention of foul brood or bee-pest. The usual conversazione was dispensed with, and the whole time at disposal devoted to the full discussion of the question at issue.

Mr. T. W. Cowan, Chairman of the British Bee-keepers' Association, presided, and was supported by the following members of the Council: General Sir Stanley Edwardes, Col. H. J. O. Walker, Major Fair, Dr. T. S. Elliott, D. W. Bishop-Ackerman, W. Broughton Carr, E. D. Till, T. I. Weston, Ernest Walker, and Thos Bevan. There were also present the following delegates and members of county associations and other friends:—Rev. W. E. Burkitt (Wilts), J. B. Lamb (Middlesex), T. Watts (Hunts), W. G. Stoneham (Berks), J. Noble Bower (Warwickshire), J. Waterfield (Leicester), W. Sole (Surrey), Miss B. M. La Mothe (Lady Warwick College), S. L. Crawshaw (Yorks), Geo. Hayes (Notts), H. Hill, E. P. Hinde (Cheshire), Robert Cock (Staffs), J. Willard, G. Saunders (Cumberland), E. Scholefield (Devon), G. T. Pallett (Derby), Jas. Pearman (Derby), L. Pallett, H. M. Turner (Oxfordshire), J. Thomas (Hereford), Allen Sharp (Hunts), Jas. Howland (Hunts), W. Woodley (Berks), A. D. Woodley (Berks), Percy Wilkins, F. W. L. Sladen, H. Edwards (Berks), A. W. Salmon (Essex and Suffolk), L. Belsham, A. Seth-Smith (Surrey), W. Alfred Dawson (Surrey), F. B. White (Surrey), G. H. Lander and W. Vivian Hatch. There were also several ladies present.

The Chairman, in opening the proceedings, said that in response to the invitation of the Council, many of the counties had appointed delegates to attend this Conference. Apologies had been received from Mr. Godson, secretary of the Lincolnshire Association, and several others, on account of absence. He was glad to see so large a representative meeting, and hoped before the termination of the proceedings that they would arrive at some satisfactory conclusions. Prior to discussing whether bee-keepers desired legislation, he thought it would be better to give a short résumé of what was done in this direction in 1895 and 1896. In the former year there arose an agitation among bee-keepers in favour of legislation dealing with foul brood, and a preliminary step taken was to obtain statistics from the different county associations throughout the country as to the number of bee-keepers, the quantity of honey produced, and the ravages of foul brood. The report was a very exhaustive one, and covered a large number of pages. The committee decided to use it in applying for legislation, and the next step was to bring it before the Board of Agriculture, adding a front sheet containing a synopsis of its contents. After that they had an interview with the Secretary of the Board of Agriculture, when it was decided that Mr. Herbert Gardner, the president, should receive a deputation on the subject. The date was fixed, and in the meantime the Association sent copies of the report to a large number of members of Parliament, and other important persons. A report of the meeting appeared in most of the daily papers, which showed that a large and very influential deputation waited on Mr. Herbert Gardner (now Lord Burghclere), President of the Board of Agriculture, at the offices of the Board. The deputation was introduced by the Right Hon. Sir John Gorst, M.P., by whom the case was fully stated, and was supported by Sir Mark Stewart, Bart., M.P., Sir Herbert Maxwell, Bart., M.P., the Right Hon. David Plunket, M.P., Sir Geo. Newnes, M.P., the Hon. Mark Napier, M.P., Sir Geo. Kekewich, C.B., Sec. Education Department, J. Round, M.P. (representing National Agricultural Union), J. H. Yoxall, representing National Union of Teachers, Thos. Snape, M.P. (representing County Councils). Ten other M.P.s were included among those present. Several of the leading members of Parliament named above spoke at length in supporting the views of the deputation, and, as will be seen, the different societies interested in bee-culture may be said to have been more or less fully represented. The result of that deputation was that the President of the Board of Agriculture fully sympathised with its objects, but said that they were such that the Government could not at that time undertake to carry out. The report that had been circulated showed that the industry was small, and the powers asked for were too costly in proportion to the value of that industry. By way of illustration the President of the Board said:—"To give you a homely simile, you can get a steam-hammer to crack an egg, but you would hardly buy a steam-hammer in order to crack eggs. Therefore you will see that the machinery necessary to stamp out disease must be in some way balanced by the capital involved and the advantages we should secure." He further recommended that

we should apply to the county councils to take the matter up. The Council's next step was to write to the county councils asking them to send delegates to meet the members of the Association in London to discuss the matter. Twenty-five county councils appointed delegates, and at the meeting which followed a joint committee was appointed of county council delegates and B.B.K.A. members. That body met and in its turn selected a sub-committee to work, and submit the result of their labours to the joint committee, who then presented the matter to the Parliamentary Committee of the County Councils' Association, that being the body that took up the county councils' business, and anything recommended by it was generally adopted by the county councils. The County Councils' Association was under the chairmanship of Lord Thring, Sir John Hibberd being vice-chairman. He (Mr. Cowan) attended before that committee, and explained the Bill that had been drawn up, after which this committee reported favourably to the county council thereon, and it was recommended that the Bill should be introduced to the Legislature. Lord Thring, being chairman of the Association of County Councils, undertook to introduce the measure into the House of Lords, but then another difficulty arose. When his lordship proposed the Bill in the Upper House he had to secure a certain number of signatures before he could read it a first time. He unfortunately failed to secure the necessary support, and the Bill could not be brought before the House, and there the matter ended for the time being. The B.B.K.A., not quite satisfied, consulted the Board of Agriculture, which undertook to issue a leaflet if the Association would prepare it, and to circulate the same, and, in fact, do all in its power to help bee-keepers to combat the disease. Leaflet No. 32 was the result. It was now out of print and the illustrations were so bad that the Board had decided to issue a new one; and he was authorised by the Board of Agriculture to say that this new leaflet would appear in about a fortnight, when he hoped bee-keepers would make good use of it. If asked for by the hundred, the Board would be glad to distribute them gratuitously. Since then nothing had been done until the recent correspondence initiated by Mr. Geo. Saunders, secretary of the Cumberland Bee-keepers' Association, who he was pleased to see was present, and no doubt would be glad to answer any question put to him. The subject had been revived by Mr. Saunders writing to the parent association and asking the Council to take up the matter again. The latter felt that at that time they were not in a position to do so; nothing had transpired to make them alter their views, the conditions had not changed, and they did not consider themselves justified in incurring a similar expense to that undertaken in 1895-6, when more than £100 was disbursed, and the Association would have been entirely bankrupt but for the benevolent assistance of private individuals. After this another letter came from Mr. Saunders, in which he informed the Board that communication had been made with Lord Onslow. No doubt the county associations had seen the letters, as he (the Chairman) understood all the correspondence had been circulated amongst them.

Mr. G. Saunders, interposing, said: I have the letters here—Lord Onslow's and one from Sir Horace Plunkett's private secretary. This last is with regard to Ireland. Mr. Lowther says: "The best course is for the B.B.K.A. to bring the matter before the Board of Agriculture; to stir up county councils to ask for some such legislation as is proposed."

The Chairman, continuing, said he had not a copy of the reply sent to Mr. Saunders, but that gentleman's action led up to the passing of a resolution on June 15 that in consequence of several of the county associations wishing the matter gone into anew, the secretary write to all the branches asking them three questions as follows:—"(1) If your association is, or is not, in favour of legislation. (2) Will your county council support or put in force an Act, if obtained? (3) Is your association prepared to contribute toward the cost of securing a Bill, and, if so, what sum? In response to that appeal replies were received from ten associations who say "Yes," they are in favour of legislation. Two other associations, although they had not replied, were known to be advocates of it, one, Cumberland, represented by Mr. Saunders to-day, and the other Worcestershire, which asked in March, 1903, that some steps of the kind should be taken. As regards the second question eleven replies had been received. Cheshire said they were asking the county council; Derbyshire said they believed so; Devonshire had petitioned already; Glamorgan would inquire; Huntingdonshire thought their county council was favourable; Lancashire would support the movement; Leicestershire were asking; Lincolnshire (Lindsey and Kesteven) had promised; Middlesex said probably the county council would; Oxford Technical Education Committee of the County Council would wait and see what the B.B.K.A. are going to do; Surrey would reply when the decision of their county council was known. Three county councils, namely, Devonshire, Lindsey, and Kesteven had

decided to petition the Board of Agriculture.

Mr. Saunders, interrupting, said that Surrey did not intend to take any action at all. Devon, Lindsey, and Kesteven County Councils had already petitioned.

The Chairman said he would be able to show that, although the county councils named intended to petition, that step had not yet been taken. He was informed only the day before at the Board of Agriculture that no such petition had been presented, but he had no doubt the intention would be carried out. As to question No. 3, which dealt with the matter of pecuniary assistance, seven replies had been sent in. Derbyshire said: "Not at present."

Mr. Pearman (Derby): I think there is some mistake; we are in favour of the B.B.K.A., if they will take it up.

Upon the suggestion of Mr. Dawson that Mr. Cowan should be allowed to proceed without interruption, the Chairman continued, saying that Derbyshire had already granted financial support to Cumberland, and the secretary had written to say that they were not prepared to give any support at present or until they saw what the B.B.K.A. were going to do. (Both Derbyshire delegates here interposed by saying that the secretary had no authority to make that statement, as they had fully decided to support the B.B.K.A.) The Chairman, continuing, said Devonshire would await estimates; Glamorgan offered £1; Huntingdon was not able to contribute anything; Leicestershire would contribute a proportionate share, say, one or two guineas; Lincolnshire would give one guinea, as well as donations from private sources—Lincolnshire was prepared to be very generous, and was really backing up the cause very well; Middlesex offered £5. That was the total of promises at present. The Berkshire Association had passed a resolution asking the Board of Agriculture to institute an inquiry into foul brood; Cheshire had already decided to support Cumberland; Glamorgan disapproved of Mr. Saunders's action, and he had no authority to use their name as approving his scheme, but were quite prepared to support the B.B.K.A. and proposed amendments. Hunts County Council refused any grant to the Hunts Association; Leicester, Lincoln, and Middlesex thought action should be taken by the B.B.K.A., the latter county having made that and the approval of the Board of Agriculture a condition of their support; Northumberland and Durham had held a meeting and decided to ask the county council to support the Bill and suggest alterations; Warwick would wait until the conference in October; Yorkshire had only one meeting per annum, at the annual show, when the decision of the association would be taken and forwarded to the B.B.K.A.

The Rev. W. E. Burkitt said that Wilts would support the parent Association and give a guinea towards the funds.

Mr. Turner (Oxford) said that Oxford would also subscribe a guinea.

Mr. Saunders remarked that many associations had proffered him monetary help. What was wanted was that the whole lot should pull together. (Order, order. Let the Chairman finish his statement.)

The Chairman, continuing, said he was dealing with the answers received from the county associations, and thought it a great pity that any misunderstanding had arisen in the matter at all. The counties had the power to send representatives to the Council meetings; if they did not exercise that power, the blame ought not to be put on the B.B.K.A., which did all possible to obtain the views of the whole country. There were only twenty-one members of the Council, while there were twenty-nine county representatives who had seats on that Council *ex officio*, and when the latter did not choose to attend meetings it was no fault of the B.B.K.A. If they preferred to neglect the best interests of the cause by absenting themselves from the meetings of the central body, then it could not be expected that the branches would be thoroughly in touch with the parent stem. Nevertheless he hoped still that these difficulties would be all satisfactorily cleared up.

Mr. Saunders, again interposing, said it was not possible for him to come to the meetings in London, as it would cost him about a five-pound note every time he attended.

The Chairman thought it would be interesting for the meeting to know what was being done in other countries with regard to this matter. He had therefore corresponded with the different inspectors, Commissioners, and others in the United States. He had written to Mr. Root for the purpose of finding out whether any statistics were available with regard to the benefits derived from foul-brood legislation in the States. That gentleman replied as follows:—"There are no statistics showing whether any benefit has been derived as a direct result of the laws on the Statute-books; but I think there is any amount of evidence to show that had it not been for these laws, in some of the States at least, bee-keeping would have been entirely wiped out. As the result of the inspectors' work disease has been kept under control, and so far curtailed as to leave very little disease left. Wisconsin, Michigan, and New York will certainly come under this heading, and it is in these States where the disease has been the worst."

They had two different plans in the States; in some cases an inspector was appointed for the whole State, while in others inspectors were appointed for the different counties. A single inspector for California (which was as large as England and Scotland together) would be of no use at all. There were large tracts of country in that State in which no bee-keepers were located. Therefore the county plan was adopted. He had written altogether to ten different States for information, namely, Michigan, Colorado, Wisconsin, New York, Ohio, Texas, California, Idaho, Nebraska, and Utah, and had received from each the laws and regulations under which they work, and comprehensive reports. He had inquired how the inspectors were appointed, also about cost of administration, and statistics of results. Michigan stated that the State Bee-keepers' Association recommends and the Dairy and Food Commissioner appoints. The salary is $500 a year for one inspector, but is not enough, and will be increased. The inspector says: "This law was passed three years ago, and at that time the lower half of the lower peninsula of our State was practically seeded down with the disease. It is almost a Herculean task to free the State from the disease. A few localities have been cleared, in others it is kept in check, and is being kept out of the northern part of the State. It is largely a matter of education and getting bee-keepers to recognise it, and try to get rid of it." Colorado had fourteen counties and fourteen bee-inspectors. The cost of each inspector varied from $25 to $350, the average being $100, that was $1,400 for the whole State, or £280, or $5 per day and $2 per half-day in payment of work done. His (the Chairman's) informant called attention to defects in the State's law, an important one being that there was no clause which would prevent the importation of disease; also that there were no means of exacting a faithful fulfilment of duty by the inspectors, who were inclined to shirk their work when it was inconvenient to attend to it. Wisconsin's Act had been in operation for seven years. $700 per annum was allocated to the work, and the one inspector was appointed for two years. This inspector, according to the last report, visited 230 apiaries containing 12,493 colonies. In 66 apiaries there were 1,608 diseased colonies. In New York State the Commissioner of Agriculture appointed four inspectors, the State being divided into four partitions for the purposes of bee-inspection. Each inspector received a salary of $800 and expenses annually. The Commissioner had supplied him (Mr. Cowan) with a voluminous report, from which it appeared that in the year 1900 in the contaminated localities about 30 per cent. of hives were diseased. Those figures had now been reduced to 5 per cent. owing to the exertions of the inspector. Idaho failed to obtain any legislative enactment. Texas referred his (Mr. Cowan's) letter to Professor Scholl, from whom no reply had yet been received. In Ohio there was an inspector appointed by the Governor of the State on the recommendation of the B.K.A., but no statistics of cost or report had been forwarded from there. In California the inspectors were appointed on the petition of ten or more landed residents. The expenses allowed were $3 per diem. The law there was confined to counties, and as some of them had very few bees within their limits only a few counties had inspectors. While admitting that much work had been done, it was remarked that in some cases the inspectors did not do their duty properly. In Nebraska the Governor appointed an inspector on the nomination of the B.K.A. at a cost of $2 a day. In Utah an inspector was selected by the Agricultural Commissioner, the cost being paid out of the Treasury. This was the gist of the information obtained from the United States, which he contended was on the whole favourable to legislation regarding foul brood, and showed that the action taken by the various States had been beneficial. In conclusion, he suggested that the meeting should first consider whether bee-keepers wished for legislation or not, and before discussing any other point he desired to have an expression of opinion thereon from that Conference. Let each county delegate say "Aye" or "No" to that question, before embarking on any detail, whether of the Bill or otherwise. (Loud applause.)

Mr. Noble Bower (Warwick) said that before any discussion was entered into it should be quite understood that any steps to promote legislation should be taken by the B.B.K.A.

Mr. Stoneham (Berks) supported that proposition. It was eminently necessary among bee-keepers that there should be unity in the household. No doubt some expense had been incurred by the association that had been prominently concerned in the movement lately, and care should be taken to insure it against any pecuniary loss on account of what had been done already; but it was most desirable that the movement should be unanimous and headed by the B.B.K.A.

Mr. Saunders said that his association was well backed up by guarantees, and they had a sum in hand at the present time, so that he could not at present see any reason for yielding their independence. The speaker then read a large portion of his "No. 5 Circular Letter" which had been distributed to all county associa-

tions, and gave details regarding the support and encouragement extended to the movement by various associations and county councils. Continuing, he said that the matter was so advanced in his hands that it was difficult to abandon his position. He had received favourable replies from nine county councils. The movement was going ahead, and he was perfectly willing to continue his exertions, and, if desired, head all his circulars with the words, "Under the auspices of the B.B.K.A." He had plenty of guarantees which showed there was no fear of failure of pecuniary support. He was also in full correspondence in every direction, and it was impossible for him to drop the business now.

After a hint from the Chairman that the speakers were not keeping to the question, which was "Were bee-keepers in favour of legislation or not?"—

Mr. Watts (Hunts) wished to echo the opinions expressed at a meeting held the previous Saturday in Huntingdon, Lord Sandwich (President of the C.C. and the B.K.A.) in the chair. Previously a sub-committee had passed a resolution against legislation, and at the Saturday assembly the feeling was so strong on both sides that Lord Sandwich proposed the adjournment of further discussion till the next meeting in January, 1905. He (the speaker) thought there might have been a majority in favour of legislation if a vote had been taken, and he believed the county council would be in favour of legislation and ready to adopt any reasonable Act that might be passed.

Mr. Allen Sharp (Hunts) said he was present at the Hunts Association meeting, to which the last speaker referred, and he left with a different impression of the feeling of that assembly to what had just been expressed by the Hon. Sec., Mr. Watts. He (the speaker) knew that some of the largest and most successful bee-keepers in the county were dead against legislation. When the subject was mooted several years ago he was most strongly opposed to legislative interference, and had seen no reason to alter his opinion since. He had been a bee-keeper thirty years, and now owned 140 colonies, one apiary of 50 colonies being situated a considerable distance from Brampton, where he lived. At certain times he could handle his bees with impunity, while at others any interference would upset them for an indefinite period; therefore he objected to an inspector coming into his apiary unexpectedly and disturbing his bees. He knew that the inspector must have "reasonable cause" for the intrusion, but ideas differed on what was "reasonable cause," and the poor bee-keeper would, he supposed, have no voice in the matter. There were now scores of strong and healthy stocks in the county, which five years ago would have been condemned as affected with foul brood. Let every bee-keeper rely on his own resources, and do his best to cure the disease, or stamp it out. A good neighbour could not be made by Act of Parliament! At any rate, the Hunts Association had come to no decision at present, the consideration of the matter having been postponed till January, 1905.

Mr. Pearman (Derby) had recently called on a gentleman who had been "hard hit" in consequence of an obstinate neighbour, who said he would do just as he liked with his bees. The former had had to destroy twenty-five diseased stocks in consequence. Mr. Sharp might be able to cure foul brood, but all bee-keepers could not. He (the speaker) was rather surprised to hear the Chairman's remarks about the Derbyshire B.K.A. He was present at the local committee meeting when the subject was brought forward. The association had certainly subscribed to Mr. Saunders, but—as he had already said—were unanimous in regarding the B.B.K.A. as the proper body to take the matter up, and were very desirous of legislation. The County Council had not yet been approached, and therefore it could not be said whether they would support it or not. Although they were the proper persons, it seemed to him a little bit "offside" to go to a county council and ask if that power would put into force a Bill which might or might not be passed by the Legislature. Let a practical measure be brought before Parliament, and become law, when he had no fear but that county councils would generally enforce it. The Derbyshire County Council gave £50 for bee-keeping purposes without any objection whatever.

Mr. Hayes (Notts) said his association had not yet definitely replied to the B.B.K.A. nor to Mr. Saunders either; but it was in favour of legislation against foul brood, which in their opinion should be brought about by the parent association. The Notts County Council, which granted £40 or £50 annually for educational work in bee-keeping, had been approached, but no reply was yet forthcoming. Nevertheless he thought they would be willing to help. His committee were unable to judge what the expenses would be in connexion with the Bill, and, as the association was only a poor one, they could not ruin it by promising any large sum, but he was sure, without making a pledge, that they would be willing to assist to the best of their power.

(*Report continued next week.*)

THE DAIRY SHOW.

The British Dairy Farmers' Association held their twenty-ninth annual show at the Agricultural Hall, London, on Tuesday, October 4, and three following days. The honey section was staged in the Minor Hall, and although an adverse honey season militated against a large display, some very fine honey was shown. The space occupied by the Conference this week only allows for insertion of prize list. Further comments must therefore be reserved.

Mr. T. I. Weston and Mr. W. Broughton Carr undertook the duties of judging, and made the following awards:—

Twelve 1-lb. Jars Light-coloured Extracted Honey.—1st, J. Boyes, Bridge Street, Cardiff; 2nd, J. Jones, Wegber Quarry, Carnforth; 3rd, A. Hamer, Llandilo, N. Wales; 4th, Richard Brown, Somersham, Hunts; r. and v.h.c., James Lee and Son, Martineau Road, Highbury, London, N.; v.h.c., G. W. Kirby, Knowle, Bristol; h.c., E. E. Scholefield, Heathfield, Chudleigh, Devon.

Twelve 1-lb. Jars Medium-coloured Extracted Honey (other than Heather).—1st, H. W. Seymour; 2nd, Charles Squire, Morthoe, Devon; 3rd, James Lee and Son; 4th, G. W. Kirby; r. and v.h.c., A. E. Russell, Louth, Lincs.; v.h.c., Fredk. J. Old, Piddington, Manchester; h.c., E. C. R. White, Newton Toney, Salisbury.

Twelve 1-lb. Jars Dark-coloured Extracted Honey (including Heather Mixture).—1st, H. W. Seymour; 2nd, Richard Brown; r. and v.h.c., John Helme, Norton Canon, Weobley, Hereford.

Twelve 1-lb. Jars Extracted Heather Honey.—1st, John Helme; 2nd, Mrs. F. F. Upton, Rugeley, Staffs; r. and h.c., John Berry, Llanrwst, North Wales.

Twelve 1-lb Jars Granulated Honey of 1903 or any previous year.—1st, A. Hamer; 2nd, W. Woodley; 3rd, Richard Brown; r. and v.h.c., A. E. Russell; v.h.c., C. Lodge, High Easter, Chelmsford, Essex; h.c., H. W. Seymour.

Twelve 1-lb. Sections (size 4¼ by 4¼).—1st, James Lee and Son; 2nd, W. Woodley; 3rd, A. W. Weatherhogg, Willoughton, Lincs.; r. and v.h.c., H. W. Seymour; h.c., E. C. R. White and Joseph Boyes.

Twelve 1-lb. Sections (other than 4¼ by 4¼).—1st, A. W. Weatherhogg; r. and v.h.c., H. W. Seymour; v.h.c., Richard Brown.

Twelve 1-lb. Sections Heather Honey.—1st, J. M. Balmbra, East Parade, Alnwick.

Display of Comb and Extracted Honey.—1st, James Lee and Son; 2nd, W. Woodley; r. and v.h.c., Richard Brown; h.c., H. W. Seymour.

Beeswax (not less than 2 lb.) Extracted and Cleaned.—1st, E. C. R. White; 2nd, C. Lodge, High Easter, Chelmsford; r. and v.h.c., H. W. Seymour; v.h.c., R. Morgan, Cowbridge, H. W. Seymour, and John Berry; h.c., James Lee and Son; c., E. E. Scholefield.

Beeswax (not less than 3 lb.) in Marketable Cakes Suitable for the Retail Trade.—1st, Fred. Harris, High Ferry, Silsby, Boston; 2nd, J. Pearman, Penny Long Lane, Derby; 3rd, E. C. R. White; r. and v.h.c., C. Lodge; h.c., H. W. Seymour.

Interesting and Instructive Exhibit of a Practical Nature. — 1st, James Lee and Son; 2nd, H. W. Seymour.

The Silver Challenge Cup of the B.B.K.A. was awarded to Messrs. James Lee and Son.

WARWICKSHIRE B.K.A.

ANNUAL SHOW.

The annual show of honey, bees, and appliances was held at Leamington in conjunction with that of the Agricultural Society, and was a success notwithstanding the adverse season. We note that the W.B.K.A. gives free entry in all classes to its members while non-members pay 2s. 6d. per entry. Also that a special feature is made of the honey fair, and that the now rarely seen "Bee-driving Competition" is included in the programme.

Mr. T. I. Weston officiated as judge and made the following awards:—

Collection of Bee-Appliances. — 1st, E. H. Taylor, Welwyn, Herts; 2nd, G. Franklin, Kenilworth.

Observatory Hive with Foreign Bees and Queen.—1st, E. H. Taylor; 2nd, G. Franklin.

Observatory Hive with English Bees and Queen.—1st, E. H. Taylor; 2nd, G. Franklin.

Complete Frame-Hive.—1st, E. H. Taylor; 2nd, G. Franklin.

Display of Super Honey from one Apiary.—1st and Silver Medal, W. H. Allard; 2nd, J. Corbett.

Box of Comb-Honey in Shallow Frames.—1st, J. Rodenhurst; 2nd, W. H. Allard.

Twenty-four 1-lb. Sections.—1st, W. H. Allard; 2nd, L. G. Eveson; 3rd, Dr. Savage.

Twelve 1-lb. Sections. — 1st, Miss R. Haine; 2nd, Miss B. M. Stanton; 3rd, L. G. Eveson.

Twelve 1-lb. Jars Extracted Honey.—1st, W. Fake; 2nd, H. Cleaver; 3rd, W. R. Charles.

Display of Extracted Honey (not over 50-lb.).—1st and Bronze Medal, W. H. Allard; 2nd, W. F. Stanton.

COTTAGERS' CLASSES.

(*Non-Winners in Previous Classes.*)

Display of Super Honey from one Apiary.—1st (and Certificate), J. Seeney.

Twenty-four 1-lb. Sections. — 1st, W. Churchill; 2nd, J. Lees; 3rd, J. Seeney.

Twelve 1-lb. Sections.—1st, E. Cleaver; 2nd, J. Seeney; equal 3rd, R. Cleaver and W. Coles.

Twelve 1-lb. Jars Extracted Honey.—1st, J. Seeney; 2nd, R. Cleaver; 3rd, S. Ford.

SPECIAL PRIZES.

Display of Super Honey (to commemorate 25th Anniversary of B.K.A.—1st, (£2), H. Cleaver; 2nd (£1), G. Franklin.

Beeswax.—1st, G. Franklin; 2nd, W. J. Alliband; 3rd, W. H. Allard.

Bee-Driving Competition. — 1st, W. H. Allard; 2nd, E. Franklin; 3rd, J. Burbidge.

The Hon. Miss Leigh (accompanied by Lord Leigh, President of the Association) distributed the prizes at the exhibition tent on the first day of the show. — J. NOBLE BOWER, Hon. Sec.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of September, 1904, was £1,462.—From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

[5654.] *Clearing Supers.* — When playing amateur expert means and appliances are not always at hand to clear bees out of supers, so the old and well-nigh discarded plan of shaking them from the sections has often compulsorily to be resorted to. In the middle of a fine day it answers all right, as the intimidated bees, little if any the worse, on recovering their senses, fly quickly homeward. Later in the season, when the days shorten, when the ground is cold and damp, and the air is chill, the bees quickly lose their vitality and lie down to die. The practice then is reprehensible, and should not be performed. At times bees can be cleared out by simply placing the full crate over quilts in the afternoon, and allowing the bees to escape by early forenoon by means of the cone escape forming the ventilator on most hives. All roofs should have one of these, as they are a great saving of bee life. The Porter bee-escape is now so common that it must be familiar to all, and it is an excellent contrivance for clearing supers without handling bees. This system is a great boon not only to the operator, but also to his neighbours, and is a veritable blessing to the race, inasmuch as it saves bee-life, and keeps them in a sweet temper even when taking honey. For the past few years I have discarded all these means of clearing supers, and my Porter has been consigned to the bee museum.

When clearing racks of sections, I raise them clear of the hive, place quilts over frames, or over the top crate. Then I darken the roof and leave the bees no means of exit but towards their confrères in the brood body. This they quickly find, and then there is a stampede for the loved centre round which all their joys are focussed. In a very short time, indeed, the sections are clear of bees. It takes less time, makes less disturbance, is less likely to fail, requires less manipulation, is cheaper, and is always ready at hand under almost every supposable set of circumstances. I have already fully described it, and recommended its use.

The Expert.—I doff my cap to the whole race. The man who has attained a *First* deserves our respect and esteem. If I had foul brood in my apiary I would welcome a visit from such a one, and give him *carte blanche* in examining what he deemed demanded it. Of some of the brethren who take an opposite view, I would query: "When you call in the doctor to a sick member of your family, do you expect him to examine and test your youngsters who are romping outside in perfect health?" If not, why should you hold that the expert would overhaul your hives with two or three crates on? Pray give these gentlemen the credit of having at least a modicum of common sense. As to carrying infection, how very seldom does a doctor carry an epidemic disease from one household to another? Then, why should the expert, who knows his business, be a centre of contagion? Both contentions are ludicrous"! I do not coin the phrase, but have adopted it from a late issue of *Gleanings*, in order that some of those who condemn compulsory powers should see how outsiders view their opinions and contentions.

A Rare Experience.—A bee-keeper records the death of a queen as a result of the parting of the cluster during a short spell of mild weather in early spring. The majority of the bees, following the food,

went well to the rear combs of a hive with frames parallel to the entrance, while she, with a small minority of the bees, remained on the front frame. A cold snap must have followed, and the result was that the queen and the few faithful attendants, who chose death and allegiance to their monarch rather than life and comfort apart from her, were chilled to death. One would like to speculate over the reason why this small detached section should have remained in a position where famine stared them in the face, while the others wisely sought out the life-giving nectar which alone could save their lives. Was it pure love for the mother bee that impelled that forlorn hope to offer up their lives on the altar of duty?

Rejected Combs. — In the past I have thrown aside all defective combs when making the spring examination. If any contained honey they were uncapped, hung behind the dummy until the bees cleaned them out, when they were converted into wax. I have just discovered a more excellent way of disposing of these combs. The hint was derived from Mr. McNally's excellent contribution on page 84 of *Record* for June. All these combs in future will be placed in spare body-boxes, and given to strong stocks as supers when they are fit for doubling. At the end of the season, after acting as surplus combs, they will be pressed. Generally these combs are cast aside because of faults in construction, from having been too long in use, owing to their containing too large a percentage of drone cells, or from a want of interchangeability; but none of these are specially serious drawbacks to their use in these surplus chambers. The additional surplus the use of these ready-built combs will undoubtedly secure should more than make up the smaller price likely to be obtained.

Corrugated Combs.—When examining a hive lately I came on a curiosity in this line. The bees seem to have begun construct- the works at one side, and the foundation in the third frame had evidently been forced into the saw-cut, so that it adopted a wavy outline, with the result that three bulges in the comb were clearly discernable. The next comb had four of these more marked still, and so on until the tenth comb had eight distinct corrugations, practically from top to bottom, and on the dummy-board fairly large patches of comb were constructed to carry on the outline. The interspaces were to all appearance mathematically correct in the outside combs and throughout were at least sufficient to provide the usual free bee space. The frames had all been fitted with simple starters of foundation, so that the bees were able to carry on their corrugations with perfect freedom. It was an object-lesson in favour of the use of full sheets and wiring frames.—D. M. M., Banff.

SELLING DRIVEN BEES.

[5655.] May I be allowed to say a word in reference to my advertisement in B.B.J. about "Driven Bees" or you may be getting complaints of want of attention? The fact is I have been simply inundated with orders, and have already sent bees to nearly every county in Scotland, many to Ireland, and still more to various parts of England. I have orders in hand for 92 lots of driven bees. I have written to all the advertisers in B.B.J. who offer driven bees for sale to help me out, but had no reply except from Mr. Brown of Somersham. I am trying my level best to oblige everyone, and working early and late with bee-driving and packing bees, consequently I have not had time to answer customers' letters. I can, however, assure them that any cash in my hands is quite safe, and that I will despatch the bees at my very earliest opportunity. To climax all I have received an order for South Africa for 20 strong stocks of bees in "W. B. C." hives.—W. H. Brown, Shropshire B.K.A.

ADVERTISERS' TROUBLES.

QUEEN BEES SOLD OUT.

[5656.] It is some weeks now since I advertised queens for sale in B.B.J., and I have been sold out for some time now, but I am continuing receiving orders from all parts, and, although letters are answered and cash returned at the earliest opportunity, it means delay and expense to senders. I will, therefore, be obliged if you will adivse readers that we cannot supply any more queens this season for the reason stated above. If necessary you might insert a small advertisement to that effect, for which I am quite willing to pay. —E. W. Carbines, the Apiary, Cardinham, Cornwall.

ITALIAN BEES AND FOUL BROOD.

[5657.] I can thoroughly endorse Mr. Sladen's remarks in last week's B.B.J. respecting Italian queens and foul brood. Some few years ago one of my apiaries (containing some forty stocks) was almost completely destroyed owing to the ravages of this pest. I tried introducing new blood, and purchased a queen direct from Italy, which was given to a colony and duly accepted. The following spring two of my stocks swarmed, and the young queens mated with Italian drones from the above-named colony. In course of time my other stocks dwindled down to seven, and these were ultimately burned, thus leaving me with only the one stock of pure Italian and two offsprings of the same. This, I think points conclusively to the value of this particular breed of bees as

possessing a certain immunity from the scourge of foul brood. I have had no return of the disease since the introduction of Italian blood, and am constantly improving my stocks by obtaining queens and stocks from all parts of the country. It is the true secret of success. I am often tempted to reply to some of your correspondents, but my time is too limited to enter into these lengthy controversies.—JOHN J. KER, Southbridge, Harlow, Essex, October 10.

Queries and Replies.

[3589.] *Long-Tongued Bees (?).*—Charles Darwin, in his "Origin of Species," says:—"I do not know whether the published statement can be trusted—namely, that the Ligurian bee, which is generally considered a mere variety of the common hive-bee, and which freely crosses with it, is able to reach and suck the nectar of the red clover." As I have no doubt you will be acquainted with the passage, I should like to ask whether you can tell me if this is so, as I have generally understood that none of our hive friends are able to extract the sweets of the red clover (Trifolium pratense).—A. AITCHISON, Corbridge-on-Tyne, October 3.

REPLY.—In the above quotation Darwin does no more than give currency to the "statement" very freely published more than twenty years ago with regard to the longer tongue of the Ligurian bee. But this theory has long since been scouted by practical bee-men—who have no vested interest in the matter — as an exploded fable. Both Italians and natives work freely on second-crop red clover in some seasons, but neither variety will cause a crop of red clover (Trifolium pratense) to perfect seed in countries where there are no bumble-bees, as was proved in New Zealand.

[3590.] *Dealing with Slight Foul Brood.*—Thank you for prompt reply in B.B.J. of September 15 to my query (No. 3561); foul brood in its first stage is now clear to me. May I ask your advice on following?—I have a stock in a fifteen-frame hive; bees now cover eight; plenty of stores and brood. On making a thorough examination, i.e., looking at every cell of brood, I found three cells only with foul brood in first stage, and all the others free from it and quite healthy. I cut out the three diseased cells and burnt them. I have been advised to extract four or five frames and give them to the bees to clear out, and then fumigate with salicylic acid, and give these to bees in spring, at same time taking out the five they have wintered on and destroy same, then feed up with medicated syrup and transfer to clean hive. Please say if this is good advice and if I should adopt same, or kindly advise me what to do?—F. O. F., Birmingham.

REPLY.—In view of all the circumstances detailed above we think the advice already given is about the best that can be followed, if we except the idea of destroying the frames on which the bees are wintered. With regard to this, we cannot see the need for destruction unless traces of disease are seen in the brood in spring.

[3591.] *Bee Parasites.*—Will you please let me know, in next B.B.J., if it is common to come across cases of parasites on bees? When examining a lot of driven bees I have just bought I noticed three or four small reddish-coloured parasites of some sort on the queen bee, and one or two on some of the others. They strike me as being the same as are often found on beetles, etc. I have looked in my book and can find no reference to such things. Will they do any harm, and can anything be done to get rid of them?—A. HOLMAN, Penarth.

REPLY.—The insect noticed is fully described and illustrated by a photo from life in the "Guide-Book." It is the Braula cœca (or blind louse). For full particulars and method of getting rid of the parasite see page 160.

[3592.] *Propolis and Laburnums.*—A bee-keeping neighbour has a hive placed under the shade of a laburnum tree. The super was fixed to the frames by the black substance enclosed, and I therefore ask: Is this propolis from the laburnum? My own hives, about half a mile distant, have not a trace of it.—A. HENRY, Wick, N.B.

REPLY.—We never heard of the laburnum yielding propolis. Judging from sample sent our view of the "substance" referred to is that it is propolis with a large admixture of soot, caused, may be, by the trees from whence it was gathered being set near to a chimney, the blacks, or smuts, from which have fallen upon the leaves or buds. It has none of the ordinary characteristics of the "resinous substance obtained from the buds and limbs of trees" known to bee-keepers as propolis.

[3593.] *Dealing with Driven Bees.* — I have to thank you for assisting me on several occasions through your columns, and shall be much obliged to you if you will again do so in the following:—On Saturday, September 24, I drove a skep of bees to save them from the sulphur-pit. After driving I brought the bees about thirteen miles to their present quarters in a skep, and have fed them every day

since with syrup, and now ask: 1. Will there be much risk in leaving the bees in skep as they are? Or would it have been better to unite them to another lot of driven bees in a frame-hive which I hived six or seven weeks back? 2. They are decidedly smaller than the other bees I possess. Is this owing to the queen? 3. Are there any signs by which I can tell if the queen is safe, or would the bees be likely to carry in pollen at this time of the year if queenless? I shall be extremely obliged to you for any suggestions you can give me to insure their well-being till next spring. 4. Though only a novice at bee-keeping, I begin to feel sufficiently initiated to try for the third-class certificate of the B.B.K.A., and shall be glad if you will kindly tell me the means of obtaining the same. I send name, and sign—APIS, Birmingham.

REPLY.—1. Assuming that the bees have not been able to make much headway in comb-building from having been so recently driven, we advise uniting them to the stock in frame-hive, as the chances of safe wintering are very slight. 2. No doubt the queen will have much to do with the size of bees, heredity being a marked feature of bee-life. The outward signs of queenlessness, though tolerably plain to an experienced bee-man, are not easily explained in words to a beginner, but among the very visible signs busy pollen-carrying at this season is one of the most reliable. 4. The very fact of being "only a novice at bee-keeping" makes it certain that you would fail in securing the third-class certificate of the B.B.K.A., which is only given experts in the craft, i.e., those who have a good knowledge of practical bee-work in all its branches.

[3594.] *Wintering Bees in Nucleus Hives.*—1. Kindly say in B.B.J. whether you think bees can be safely wintered in a nucleus hive, with dummies at the side. The thickness of the wood of the hive is ½ in. on two sides and 1 in. at the other two. The hive in question contains five frames, in each of which there is about 5 lb. of sealed honey. 2. Also, do you think that would be sufficient honey to keep them well into the spring, and would there be any fear of the bees getting chilled, seeing that the hive is in a fairly well-sheltered position, and perfectly water-tight? Above the bars I intend placing strips of glass, and over them several layers of quilts. I may add there will be no space between the dummies and the ½-in. side of the hive. Name sent for reference.—NORTHUMBRIAN, Alnwick, October 7.

REPLY.—1. If the five frames are well covered with bees at this season, and carefully packed for winter, there is no reason why they should not come safely through. 2. It will require a considerable addition to the food supply. There should be at least 20 lb. of sealed stores to last the bees till March next.

Bee Show to Come.

October 20 and 21, at Kilmarnock.—Honey Show in connection with the Ayrshire Agricultural Association, Eleven classes. Liberal money prizes. Schedules from John Howie, Secretary, 58, Alloway-street, Ayr.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

*** Referring to the request of a lady bee-keeper on page 400 of last week's issue, we have received the following letter:—"Dear Sirs,—If the lady bee-keeper near Yarmouth cannot find anyone near to help her, possibly we could render the required help if she is conveniently situated near railway. Kind regards.—Yours faithfully, L. WREN AND SON, Saddlers and Apiarists, 139, High Street, Lowestoft."

*** We have received several kindly offers of help in response to the request of a lady bee-keeper near Great Yarmouth, for which we are much obliged, and will communicate with our correspondent regarding them.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul Brood."

We urgently request that all letters sent with samples of suspected comb be put outside the tin or box containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.

In urgent cases (and where possible) we undertake to "wire" replies as to F.B. if six stamps are sent to cover cost of telegram. All letters should be addressed "Editors," not "Manager."

C. E. M. (Salop).—Sample shows a bad case of foul brood of old standing.

Honey Samples.

C. G. S. (S. Norwood).—Your sample is entirely honey-dew.

J. MORRISON (Middlewick).—No. 1 is good in colour and very fair in flavour; its fault is being rather thin in consistency. No. 2 cannot be called a good table honey, though fair in quality.

*** *Several Letters and Queries are unavoidably held over till next week for lack of space.*

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

CONFERENCE WITH COUNTY DELEGATES.

(*Continued from page* 405.)

Mr. Hinde (Cheshire) said his association was very strongly in favour of legislation against foul brood. He had personally endeavoured for ten years to eradicate the disease in the county, but there were always one or more stupid persons who resisted advice or proffered help, so that when one apiary was cleaned the scourge broke out somewhere else. The thought that struck him when Mr. Sharp spoke was that that gentleman could never have seen foul brood such as they had had it in Cheshire. His association would do all in its power to support legislation.

Mr. Hartman (Staffs) said the Staffs. Association was decidedly in favour of legislation, the committee being unanimous, and were in a position to offer some pecuniary assistance.

Mr. Waterfield (Leicester) was a delegate as well as secretary of his association, and at a meeting on September 10 the committee unanimously agreed that legislation would be beneficial to bee-keeping, and were of opinion that it should be conducted under the auspices of the B.B.K.A. They would be glad to bear part of the expense, but were undecided what sum to offer—one or two guineas or something like that. They had also drafted a letter to be sent to county councils on the subject.

Mr. Pearman (Derbyshire) thought it should not be understood that Derbyshire had declined to support the B.B.K.A. pecuniarily. They simply wanted first to know what others were doing before pledging themselves.

Mr. Pallett (Derbyshire) corroborated the last speaker. The local committee would support anything done by the parent body, but no sum was voted because the committee was desirous of first seeing what other associations were doing.

Mr. Turner (Oxford) said the local association was practically unanimous in favour of supporting legislation. He had only spoken to one man who objected to it, and that was on personal grounds. There was a lot of foul brood in the county, but, strange to say, mostly near to Oxford. They knew where it was, and all the people living at Headington and Summertown had to suffer through one man's stubbornness and lack of public spirit.

The Rev. W. E. Burkitt (Wilts) said the whole of the members of his association were thoroughly in favour of legislation. He wrote about a month ago to the county council on the subject.

Mr. F. B. White (Hon. Sec., Surrey) said that after carefully considering the pros and cons the council of his association had come to the conclusion that any legislation against foul brood would be not only useless but unsound. He had been in frequent communication with the Surrey County Council, and must say that he thought that body would not support any Bill of the kind suggested.

Mr. J. B. Lamb (Middlesex), speaking from memory, said the decision of the Middlesex Committee was that in their opinion the time was not ripe to appeal for legislation, but that if the B.B.K.A. thought otherwise, and the Board of Agriculture would move in the matter, then they were willing to contribute £5 towards the expense of promoting a Bill. The previous speakers who had addressed the meeting only represented the opinions of their committees, and no doubt did not know the views of the 200 or 300 members that formed their associations. He therefore asked: Was it not desirable to postpone the question for one year (cries of "No, no!"), and until after the opinions of bee-keepers generally had been obtained? He suggested that a poll should be taken of county members, which would probably not cost the parent association more than a couple of pounds, when they could ascertain unmistakably the ideas of the majority of bee-keepers. The simple question "Are you in favour of appealing for legislation?" could be asked of each county member and answered, "Yes" or "No" on a postcard. If there were a large majority in favour, it would silence many objectors and strengthen the hands of the B.B.K.A.; while, if on the contrary, then they had no right to proceed further with the matter. He suggested the following:—

> "That the consideration of the question of promoting legislation for the prevention of bee-pest be postponed until next year, in order that a ballot may be taken to ascertain the views of members of the British Bee-keepers' Association and affiliated associations; and that the secretary be instructed to insert a voting postcard in each annual report, and to supply such cards to all affiliated associations, requesting that a copy may be inserted in each report."

Colonel Walker (Devon) said that Mr. Lamb's proposition, if he might be permitted to say so, implied an indefinite postponement. Supposing it were carried out, someone would say afterwards that only the votes of association members had been obtained, and they did not voice the

bee-keeping world, seeing that a large number of apiculturists existed outside the associations' supporters. Then all the work would have to be done over again, because it was just as reasonable to ask that the vote of every bee-keeper should be secured as of every branch member. He thought that any country member who felt strongly against legislation would take care to have his opinion considered by attending the local meeting; and, that being so, one was entitled to say that the opinion of an association's meeting was the opinion of its members. He was much opposed to postponement.

Mr. Dawson (Surrey), speaking personally, because Mr. White had already answered for the association, desired to offer his most unqualified opposition to any legislation. It was unnecessary to detail his objections, but he could only say that if this legislation were to come into force and be adopted by the county council it would cause him to give up bee-keeping entirely. In saying that, he was convinced he spoke the feelings of a great number of amateur bee-keepers in his county. He had talked with his neighbours on the subject, and one and all agreed that any enactment of the kind suggested would be a deathblow to bee-keepers of his own class. None of his acquaintance spoke in favour of it, and indeed he had only met one person who did so, and he was a member of the B.B.K.A.

Mr. Saunders said that no reasons had been given for Surrey's refusal to support the Bill. It would be only fair to explain what objections existed to the measure.

This view having been expressed by two other speakers, Mr. Dawson replied that three-quarters of an hour would be required to fully state the reasons which actuated the Surrey Committee (A voice, "Give one reason"), and he did not propose to give one when there were so many objections.

Mr. L. S. Crawshaw (Yorks) thought that most people would be in favour of legislation if they could see the end and working of it, and feel satisfied that an Act would work smoothly, and with the minimum of friction. Figures had been given showing that the disease had been repressed in places where legislation already existed. Difficulties as regards the inspectors would very likely arise, especially if they were allowed too much liberty in the interpretation of the Act. He strongly supported Colonel Walker's remarks as to the value of the opinion of the workers on this subject. The man who was sufficiently interested to turn up at meetings was the one whose opinion was worth having, while a ballot vote was of little value. Besides, one man might have one hive, and another twenty, and yet both votes would be of equal strength, while the latter bee-keeper would probably know infinitely more of his craft than the other. He (the speaker) therefore moved:—

"That this meeting is in favour of legislation, provided that a satisfactory Bill can be drafted."

The Rev. W. E. Burkitt seconded the motion.

Mr. Stoneham (Berks) considered the question asked a very crucial one. Why was there so strong an objection to the passing of a law? Was it that bee-keepers were afraid of inspectors or county councils, or what? It was well known what measures were taken to avoid infectious diseases in the homes of the people; yet occasionally cases of hardship arose out of the application thereof. He knew of a case in regard to swine fever in which the inspector and assistant continued to work without cleansing their boots and hands, and visited a number of healthy pigs in the fever district, with the most unfortunate results; but he hoped and believed that was a rare occurrence. There should be some clause in the Bill to the effect that an inspector be nominated by the Board of Agriculture for appointment by the county councils, or whatever body had to pay the expense. The gentleman from Surrey said it would take him three-quarters of an hour to state his objections, but he (the speaker) thought he had put his finger on the greatest of them all. The fear was that inspectors would communicate foul brood to healthy bees; but, if so, why allow experts to go about the country as they did? Because reasonable reliance was placed upon them; then why not the same on inspectors? He appealed to the gentlemen from Surrey to offer some reasonable ground for their attitude.

Mr. Edwards said that Berks was rather divided on the question. At the last council meeting, where some of the largest bee-keepers were represented, a resolution was proposed against the Bill, but was defeated by one vote. Generally, opposition to any legislative effort came from the big bee-keeper. With regard to Surrey, it stood in a favoured position. It was well known that Surrey, owing to a very liberal grant from the county council, and probably the largest membership in the kingdom, could afford to do its expert work as no other county could, and where ample funds were forthcoming there was less to be said in favour of putting the work on county councils. He was strongly in favour of legislation, knowing it to be absolutely necessary. The scourge could never be destroyed without compulsory powers to that end. The big bee-keepers were afraid of the inspectors'

visits when the hives were supered, and there was a danger of upsetting the lot; but any expert or foul brood inspector who would do such a thing deserved to be publicly censured. He thought the danger of an expert or inspector carrying disease from apiary to apiary very slight. A law would be restrictive certainly, as all laws were; but, provided it only prevented a man doing what he ought not to do, it was not unduly restrictive.

Dr. Elliott thought the paramount difficulty in supporting legislation was that some of the county councils would not take up the matter at all. Promises of county council help had been obtained in very few cases only, and it was easy to see that if the proposed law were enforced only in certain counties, foul brood would receive very little check, as there would be nothing to prevent diseased bees, especially those hived in close proximity to borders on one side of which the statute might be non-effective, from infecting clean stocks. He did not think the Bill would be successful because the industry was not regarded as of sufficient importance. In the United States the case was different, because a great many people made a living out of it, while here that was done by only a few. Another point was that the cost of the inspectors and compensation must come out of somebody's pocket, and it was possible that if the county councils found this expenditure amounting to a large sum they would probably withdraw their aid, and thus all possible benefit would be neutralised. Most of the proposed work could be as well done by association experts as by county council inspectors, and he thought the branches would do much better if they were to persuade their county councils to appoint additional experts. Who could isolate a stock of bees? They could not prevent bees from flying out of the hive unless they shut it up or destroyed it. Swine fever was not an analogous case.

The Chairman having asked if the meeting was prepared to vote on the question before it, Mr. J. B. Lamb moved the following as an amendment:—

> "That the consideration of the question of promoting legislation for the prevention of bee-pest be postponed until next year, in order that a ballot may be taken to ascertain the views of members of the British Bee-keepers' Association and affiliated associations; and that the secretary be instructed to insert a voting postcard in each annual report, and to supply such cards to all affiliated associations, requesting that a copy may be inserted in each report."

The mover pointed out that his proposal merely asked for that which was carried out in politics, namely, an appeal to the country when any crucial question arose for settlement. On similar grounds he asked for an appeal to the bee-keeping members of the associations.

The amendment was seconded by Major Fair, and on the Chairman putting it to the meeting, it was negatived by a very large majority, nine only voting in favour of it.

The resolution—

> "That this meeting is in favour of legislation, provided that a satisfactory Bill can be drafted"

—was then put, and two separate votes taken upon it. Firstly, the county delegates present were called on to express their opinion, which resulted as follows: 14 in favour, 2 against, and 1 neutral.

The general sense of the meeting was then taken, the issue being as follows: 31 voted in favour, and 14 against. The resolution was therefore declared carried.

After a short interval for refreshment the company reassembled, when

Mr. Stoneham moved:—

> "That this meeting of representatives of Bee-keepers' Associations do petition the Board of Agriculture to institute an inquiry into the cause of foul brood or bee-pest, and to suggest a remedy for the prevention thereof."

He said he wanted to urge on this meeting the desirability of petitioning the Board of Agriculture to endeavour to find out what was the cause and cure of foul brood. Very little was yet known except the damage done by the disease, which almost made it impossible in many places for bee-keeping to be carried on for pleasure or profit.

General Sir Stanley Edwardes pointed out that a resolution had already been carried in favour of legislation, and it seemed to him that the next step was to ascertain by vote what body should endeavour to carry out the same — the B.B.K.A. or any other association. Therefore the present proposal appeared to him out of place.

After some general remarks by several of those present the chairman said that in deference to the apparent wish of the meeting, the consideration of Mr. Stoneham's resolution would be deferred to the end of the proceedings. The next question was—In what form should legislation be asked for? The Bill promoted by Mr. Saunders this year and the Bill of 1896 were published side by side in the B.B.J., and all differences between them printed in italics. It would be very interesting to know exactly on what Mr. Saunders founded his statement that Lord Onslow had said that if the associations could in-

duce county councils to express a desire and intention to put into force an Act, then it would be passed, and also whether he (Mr. Saunders) had any definite assurance from Lord Onslow that he would pass a Government measure. There were a few points in the Bill that might with advantage be discussed and alterations made. He might instance the compensation clause. In all the States of America that he had referred to there was no compensation for the destruction of either bees or hives; indeed, the bee-keeper had to pay all the costs involved. There was another provision which some people considered a defect, namely, the alliance with the Irish Bee-Keepers' Association; but all these features would have to be considered and discussed by a committee, if appointed. This would afford the opportunity of determining the terms of the Bill to be promoted. Great credit was due to Mr. Saunders for arousing interest in the bee-keeping world as regarded foul brood, and the necessity of coping with it. He had worked hard in bringing the subject to the stage reached that day, and the best thanks of that meeting were due and tendered to him.

Mr. Hinde (Cheshire) asked if the meeting had two Bills before it? He was in favour of the appointment of a committee to examine into and decide on the provisions of the Bill.

Mr. Saunders replied that there were not two Bills, but only the B.B.K.A. Bill. When he sent out the Bill, as re-drafted, he stated in his circular that it was founded on the Bill of 1896, and had only been slightly altered.

Mr. Weston said that for all the purposes of that meeting the two measures might as well be discussed as one Bill, and the meeting could then go forward with the next resolution.

The chairman thought it would be interesting for the meeting to know what the expenses in promoting the movement had amounted to up to the present, and whether the donations had covered the expenses. Mr. Saunders, in his circulars, put the expense at £10. He asked—Had that amount been exceeded?

Mr. Saunders replied that he felt quite comfortable, as matters were going on all right in a pecuniary sense. He had been well supported, and had no fear of the future, because when the Bill became a Government measure the promoters would have no more expense in connection with it. With regard to the other question put to him, he could only say that he had seen Mr. J. W. Lowther, who wrote to Lord Onslow and Sir Horace Plunkett, and had received replies, Lord Onslow saying that if the County Councils were to ask for the Bill they would no doubt get it. He had also said that in that case the Board of Agriculture would be quite prepared to introduce a Bill. He (Mr. Saunders) had every hope of the County Councils' assistance, that was, so far as County Councils would commit themselves before holding meetings on the subject.

The chairman pointed out that Mr. Saunders' words, in circular No. 1, were as follows: — "We have Lord Onslow's distinct promise that he will pass the Act as a Government measure."

Mr. Saunders contended that Lord Onslow had given a definite assurance that the Bill would come forward under the conditions named, and that he would promote it. He could not do more.

Mr. Weston said the real point was that the County Councils must ask for the Bill. What bee-keepers had to do was to influence those bodies.

Mr. Saunders then said he had done his best in an informal way to that end, and had received many favourable replies. The only one really unfavourable reply was from the Surrey Council; but then, unfortunately, the Surrey Association were trying to prevent their County Council from agreeing to the Bill. He had issued 500 of the circulars held in his hand, and could not tell how many letters he had written to correspondents all over the country—perhaps 100 to 150 per week.

The Chairman said they would like to know what the "distinct promise" was. There was before them the actual printed letter to the B.B.K.A., which contained a copy of Lord Onslow's letter, and some of them did not understand the letter as Mr. Saunders appeared to do, or admit that any promise was conveyed.

The Chairman therefore read the portion of Lord Onslow's letter regarding which they were not agreed, as follows:—

"The proposals were in the direction of an adoptive and optional measure, enabling county councils to take steps in their districts. At present there is no evidence before me that if I were to introduce such a Bill, and pass it into law, that it would be put into operation."

Mr. Saunders thought it would be impossible for Lord Onslow to promise to pass a Bill, because that was not in his power to do; but, perhaps, an assurance that he would do his best to promote it was the most that could be expected.

Mr. Dawson (Surrey) was of opinion that the next practical step to be taken was to appoint a committee for the purpose of agreeing on the terms of the Bill and promoting it. Otherwise what was to be the authority that would take up the measure and promote it?

Colonel Walker agreed that no proper business could be done unless there was

(*Continued on page* 416.)

HOMES OF THE HONEY BEE.

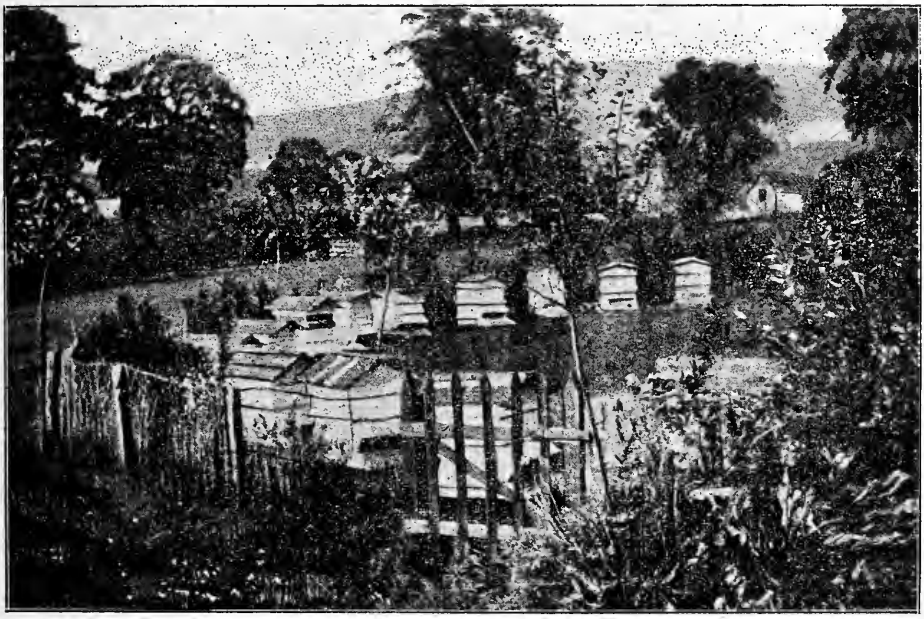
THE APIARIES OF OUR READERS.

The picturesque little bee-garden illustrated below belongs to a reader who may be interested to know that, within easy walking distance of the place where he got his first bee-experiences as a boy, was located the apiary where the Junior Editor passed over twenty years of his earlier life-work among the bees. Of himself our friend Mr. Povall writes as follows:—

"The idea of keeping bees was first aroused in me when quite a boy many years since. I made it a practice of walking two miles every Sunday in the summer, and nothing pleased me more than to see the bees swarming in my uncle's garden at Bidston, near Birkenhead. These bees were kept in straw skeps, and in the autumn consigned to the sulphur-pit! I thought, even when a boy, that this was a shame to destroy the poor bees to get the honey; and am thankful to say we now live in more enlightened times. Concerning the photo sent, and your request for a few notes on my bee-management, I may say my cottage is situated in the far-famed Vale of Clwyd. We have the Clwydian range of mountains, as seen in picture, about one mile from here, and on the other side, right across the Vale, about seven miles. The length of the Vale is about twenty miles. In this stretch of country we have an abundance of white clover and limes. About the first week of August the bees work the heather on the range of mountains.

"I commenced bee-keeping here in 1896 by purchasing one straw skep. I purchased my little place here about ten years ago. It consists of cottage, garden, and croft, having lived in the Black Country (Wigan) Lancashire) for many years previously.

"My hives are all of the 'W.B.C.' pattern, and take the standard size frame, of course. I made them myself from bacon-boxes, and have made many others for friends who are now bee-keepers. I work both for extracted and section honey, and can always dispose of my honey at a price which, while I consider it fair, pays me well. I generally get beautifully-finished sections. I commence stimulating my bees in April, and get my hives 'boiling over' with bees by the time the honey-flow commences, which is generally the first week in June. I put one rack of sections on with queen excluder in the evening, and pack this down with clean chaff (on all four sides and top of rack), and a square of brown paper fitting tightly on top. The bees are usually up, and partly fill the rack in about four days. If it is a strong colony I then raise the rack and put under it three similar racks, and after packing the whole with chaff, leave them until the honey-flow is over. This plan



MR. J. POVALL'S APIARY, BODFARI, TREFNANT, N. WALES.

always succeeds with me, but I have never seen chaff suggested for packing the section racks with in either *Record* or JOURNAL; but would say to all bee-keepers: Try one hive packed in this way, and you will not regret it. Having seen in *Record* that 1903 year was a poor one for honey, strange to say, it was the best season in my experience, and I secured more surplus honey last autumn than in any year before. My largest "take" of honey from a single hive was 93 lb. in 1900.

"I have derived great pleasure and instruction from reading the 'British Bee-keepers' Guide-Book,' and also from the B.B.J. and *Record*.

"It is very satisfactory to me to say that foul brood has never yet appeared in my apiary. I make it a practice to clean all floor-boards every spring, and also remove old comb from brood-chamber. For manipulation I seldom use a bee-smoker, but always bear in mind that there are times when the bees are very quiet, and other times when they will not be interfered with. I seldom get any stings from my bees, nor do I mind a few stings, as they give me no pain at all. While working on modern plans with frame-hives, I keep a few skeps for swarms, and introduce these in September to any stock where the queen is three years old, first taking out the old queen.

"I consider the extractor and 'super-clearer" indispensable for all advanced bee-keepers."

(*Conference continued from page* 414.)

a committee appointed. Mr. Saunders wished to work for the common good, and he (the Colonel) hoped they would have the advantage of his advice and services. Personally, he (the speaker) was against taking any practical step unless the Bill was to be brought forward by the Government. (Hear, hear.) He was not surprised at there not being perfect agreement between associations regarding the necessity of legislation and the character of it. That was only natural, but he declined to believe that any one association would try to prevent others from obtaining what they deemed to be best for the general welfare of the bee industry.

Mr. Stoneham presumed that the committee would not only draft the Bill, but would apply to County Councils to support it.

Mr. Weston said what bee-keepers ought to do was to push forward County Councils to ask for legislation on the subject.

Mr. Saunders remarked that the probability was the Government would redraft the Bill. All it wanted to know was the views of the County Councils.

Mr. Edwards hoped all would work together, and only recognise one Bill, which should represent the opinions of the majority.

Mr. Saunders said the bigger the demand for the Bill the more the likelihood of lessening its permissive provisions. With regard to Ireland, the Irish Members would block it to a man if they were left out in the cold; therefore he could not consent to the omission of the clause relating to that country.

Mr. Pearman hoped Mr. Saunders would come up to town and give the proposed committee the benefit of his assistance.

Mr. Saunders regretted he could not make many visits to London, travelling 300 miles each way, but he was ready to go on with his work under the auspices of the B.B.K.A. Nothing would give him greater pleasure than that. The County Councils would not pass any resolutions unless they knew exactly what was proposed to be done, so that they might present to the Board of Agriculture definite suggestions.

(*Conclusion of Report next week.*)

[Referring to a paragraph on page 402 last week, Mr. Geo. Saunders writes asking us to correct the statement referring to Lord Onslow's letter. What he intended to say was that he had before him *copies* of the letters in question, the originals having been returned to Mr. J. W. Lowther, to whom they were addressed. Mr. Saunders also refers to his statement on page 403, that certain County Councils had already petitioned the Board of Agriculture on the subject of a Foul Brood Bill, and in support of his contention, notwithstanding the chairman's statement to the contrary, forwards the following letter from the Lindsey division of Lincs., from which we quote as follows:—

"FOUL BROOD.

"The Lindsey County Council passed a resolution in favour of legislation on this subject on the 29th July last, and the fact was communicated to the President of the Board of Agriculture immediately thereafter."

Regarding the above letter we fail to see any intimation beyond passing a resolution in favour of legislation and communicating the fact to the Board of Agriculture. There is no notification of a petition having been presented to the Board, and the chairman's assertion that no petition had as yet been presented is not disturbed or shaken in any way.—EDS.]

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "THE EDITORS of the 'British Bee Journal,' 10, *Buckingham-street, Strand, London, W.C." All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 10, *Buckingham-street, Strand, London, W.C.*" .

*** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[5658.] The pros and cons of the foul brood question in our pages for many weeks past developed into a "Conference" on the subject in London during the Dairy Show week, and readers have had the subject fully placed before them. On October 6 the whole text of the Bills of 1896 and 1904 appear printed in parallel columns so that any little alterations between the respective Bills are seen and easily understood.

The "inspector" is mentioned in both Bills as appointed for five years in Section 3. So that if we get an inefficient one we shall have to move the powers that be to get his removal; and Section 4, I would remind my friends, details what you may expect at his hands. Section 5 (ss. b) is also a most important point to remember, and I appeal to the bee-keepers of England—not to those who are keepers of bees in one, two, or three hives, but to bee-keepers who depend primarily on their bees for a living, devoting their time and energies to the production of bees, queens, and honey in commercial quantities; these are the men who will be "hard-hit," if not ruined, if this Bill becomes law. To such I appeal to study their own interest and that of bee-craft. To such I say—Let us combine against legislation. The meshes of the net mentioned in Section 4 and stretched by Section 5 may include your healthy apiary in the proclaimed district of an infected apiary, say, two or three miles away, and you will be debarred from the sales of swarms and queens or of even your honey, for the section reads: "or any infected product of bees." Surely any J.P. will read "honey" in this section of the Act!—for how long? It may be for years, if the inspector cannot cure the infected one, and during this period of suspense the bee-keeper and breeder of bees in a large way may starve, for I fail to find any compensation clause that applies to cases such as these.

"Compulsory powers" in some inspectors' hands would be used to the full extent allowed by law, and with the law behind him he may visit apiaries at times when disturbance of hives would mean great loss to the owner thereof, and, in spite of protests, the owner would become a mere cypher in the matter unless he chose to run the risk of prosecution and a heavy fine. It is no flight of fancy to say that experts do examine hives when the latter are supered. I have been told this by experts themselves; and I contend that if an apiary of fifty to a hundred or more hives are in supering condition in May or early in June that the inspection of these apiaries should carry compensation for loss by disturbance of not less than 1s. per hive in normal bee-weather, and if a good honey flow is on at the time, 2s. for each hive examined—i.e., dismantled, supers removed and the whole brood combs thoroughly examined—would no more than compensate the owner for the loss sustained, taking every point into consideration likely to accrue from the disturbance.

Our esteemed Scotch friend "D. M. M." recently called some remarks of mine "cold douches." Now he has gone further, and with "Gleanings" considers my "contentions ludicrous." They may be to some who are onlookers only; little England is not big America—and the Bill does not extend to Scotland. Our friend's query re doctor does not appear quite relevant. Seeing that, if an examination of hives in an apiary is not thorough, foul brood in the incipient stage may be missed or overlooked; therefore every hive and every comb containing brood must be carefully examined. As regards carrying infection, I may mention that during the smallpox scare a few years back in these parts, our medical officer of health contended that it would not be safe for him to visit smallpox patients (if any), while attending to his private patients, owing to the possibility of his carrying infection. *Verb. sap.*—W. WOODLEY, Beedon, Newbury.

THE DRAFT FOUL BROOD BILL, 1904,

FROM THE LEGAL STANDPOINT.

[5659.] May I venture a few comments on several clauses of the Draft Bill of 1904, as printed in your issue of last week? My object in doing so is not to criticise, but, being in close touch with Parliamentary "law-business," I think it well to point out weak spots where I see they plainly exist.

Clause 1.—Definitions:—(a) Is the de-

finition of "hive" wide enough; would it cover a receptacle which, while not ordinarily used or intended to contain bees, has been used for bees, but is no longer so used, and is not intended to be so used. Would not a better definition be "and the word 'hive' includes any receptacle containing bees, which is intended to contain bees, or has contained bees"?

(b) Statutory powers are sought to be conferred on bee-experts or instructors in bee-keeping. There is no definition of "bee-expert." This should be defined "'Bee-expert, or instructor in bee-keeping' means any person holding a certificate as such from the British Bee-keepers' Association or any Association of Bee-keepers."

Clause 5 (1).—See Clause 6.

Clause 5 (2).—There is no provision in this clause for the inspection and advertisement of proposed bye-laws and the printing of confirmed bye-laws.

It would be better to incorporate Sections 183, 184, and 185 of the Public Health Act, 1875, thus:—

5 (2).—"The provisions of Sections 183, 184, and 185 of the Public Health Act, 1875, should apply to any bye-laws made by a local authority under this Act; provided always that in England and Wales 'The Board of Agriculture and Fisheries' and in Ireland 'The Department of Agriculture and Technical Instruction for Ireland' shall be substituted for 'The Local Government Board.'"

Clause 6.—This clause is necessary in view of Clause 5 (1) (a), which empowers a local authority to make bye-laws "for prescribing the *mode* of notification of existence of bee-pest to be given to the local authority" only. Clause 5 (1) (a) does not give power to require notification but is confined to prescribing the mode of notification. This clause (6) was left out of the Bill of 1896 because Clause 5 (1) of that Bill gave power to make bye-laws for requiring the notification of the existence of bee-pest. As Clause 5 (1) leaves it to the discretion of the local authority ("*may* make bye-laws," etc.) to make bye-laws, Clause 6 of this Bill should be left in, as notification of the existence of bee-pest is necessary to the carrying out of the Act, and such notification should be compulsory in all cases.

If this clause (6) is left out, Clause 5 should be altered:—"5 (1).—A local authority *shall* make bye-laws:—(a) for requiring the notification to the local authority of the existence of bee-pest and for prescribing the mode of such notification."

Clause 7.—Is not this clause rather too stringent? It is held by authorities on the subject that honey from stocks infected with foul brood is quite harmless and fit for human consumption, and surely beeswax from such stocks is fit for domestic use. The clause as it stands would prohibit any removal or sale of honey or beeswax for such purposes.

Would it not be better to add a proviso to meet this?:—"Provided always this clause shall not apply to the removal, sale, or disposal of honey or beeswax where such honey or beeswax shall not be used in connection with bees."

Generally.—The Bill makes no provision for dealing with stray stocks and swarms. These stocks and swarms are fruitful sources of foul brood, and it would be an improvement if a clause were added empowering bee-experts or instructors in bee-keeping, and persons authorised under Section 3, to enter any premises where such swarms and stocks exist and deal with them, by removal or otherwise. Of course, the matter could be dealt with by a bye-law under Clause 5 (1) (e), if the local authority could be induced to make one, but a clause in the Bill would be better.—I send name, etc., and sign GINGER, October 14.

SELLING DRIVEN BEES.

[5660.] Mr. W. H. Brown says (5655) that, receiving more orders for driven bees than he could accept, he "wrote to all the advertisers of these in the B.B.J. for assistance in supplying his customers, but received only one reply." I advertised driven bees for five or six weeks but had no comunication from Mr. Brown. Like him, however, I had as many orders as I had time to see to.

I am by no means surprised at the remarkable popularity of "driven bees." They raise brood with such vigour in their new home when hived on foundation and properly fed, that I have almost invariably found them to make the best of stocks the following season. This I attribute to the large proportion of autumn-bred bees. I know my opinion is opposed to that of the Junior Editor, with whom I had a conversation on this point some three or four years ago, and I disagree very strongly with the advice given on p. 308 to a correspondent (3512). It would be instructive to hear the experiences of those who have fed driven bees.

By the bye, I should like to recommend those who wish for Italians to buy a queen at a low price in autumn and introduce her to a driven lot. The stock in spring will prove my contention.—JOHN P. PHILLIPS, Hon. Sec. Worcestershire B.K.A., Spetchley, Worcester, October 17.

[After referring to the reply on page 308 we see no reason to alter our views as therein expressed.—EDS.]

LATE REARED ITALIAN QUEENS.

[5661.] May I venture to ask your correspondent, "Italian, Worcester" (3583, page 398), if he has decided to kill the four young Italian queens mentioned in his letter? If he has, I should like to have the chance of accepting one, and run the risk of her being fertilised. Speaking for myself, I may say with queens and drones flying at the same time, I should have no doubt about fertilisation. I have this year reared four young black queens and not a drone in my apiary, or nearer than a quarter of a mile, and only a few in one hive there. Yet all four queens are fertile and laying. This was the latter end of August—very little earlier than the queens mentioned by your correspondent. My object in writing is to say that I will exchange a fertile young black queen for one of his doubtful Italians; or, if he does not care to introduce black blood into his apiary, I will gladly send on a queen-cage in which to forward me one of his young Italians, and take the risk of non-fertility, as I am desirous of trying Italians. Should this meet the eye of your correspondent I will be pleased to hear from him at convenience.—C. CLARKE, Loscoe Grange, near Codnor, Derby, October 12.

Queries and Replies.

[3595.] *Ridding Hives of Wax-moth.*—1. Will you kindly tell me through the B.B.J. the best way to get rid of wax-moth? In September last I drove two lots of bees from skeps and put them into a queenless hive containing only a few bees. The hive was at the time slightly infested with wax-moth, but now at the end of a month I find great numbers of the moth larvæ eating the combs, making webs, and worrying the poor bees extremely. I last week took out all the combs and bees, and cleaned the whole hive thoroughly, but I find this has not entirely stopped the ravages of the moth, and I am so afraid they may destroy all the bees. 2. I notice that in six of my hives just now examined there is not any trace of brood, though I am feeding the stocks and the bees are also coming in laden from the mustard, which is in full bloom.—I send name and sign—"TEB" TAYLOR, Griston, Norfolk.

REPLY.—1. The recent cleaning of the hive in question would only remove or get rid of such eggs or larvæ of the moth as had not already got possession of the combs. These latter can only be destroyed by the bees themselves or by the bee-keeper. If, however, the bees are strong and the moth larvæ not too numerous, the trouble will be got over in due course. Weak stocks are always liable to trouble from moths, and no doubt the mischief was wrought before you strengthened the colony by adding driven bees. 2. It is not uncommon to find a cessation of breeding in autumn after so poor a honey season as that now ended; but if bees are busy pollen carrying, and you continue feeding, it is more than probable that a patch of brood may be raised before winter sets in.

[3596.] *Transferring Driven Bees.*—I have just had a present made of a lot of driven bees, which I am feeding at present in an ordinary skep hive into which they were driven three weeks ago. Could you tell me whether to let the bees transfer themselves to a frame-hive in the spring of 1905 or to wait until the end of July or August before doing so?. With thanks in anticipation of reply—J. T. THORPE, York, October 12.

REPLY.—If you can manage to winter the bees safely—which is, to say the least, doubtful, unless the skep was furnished with ready-built combs when the driven bees were hived in it—the transferring should be deferred in spring till the skep is getting crowded with bees, but no longer. Then set the skep above top bars of frame-hive as proposed, and allow the bees to transfer themselves below.

[3597.] *Discouraging Experiences.*—As a reader of the B.B.J., allow me to trespass upon your good offices under the following circumstances. The past two years have been with me a very disheartening experience. Last year my honey crop was poor, very poor, and I found traces of foul brood. The stock in which I found it was destroyed, and the rest fed with medicated syrup all the winter. In the spring the hives were most promising, full of bees, and my hopes ran high, only to meet with worse disappointment. At the end of June I found bees disinclined to work in the supers and casting out drones. The weather then changed for better, but the bees did no good, owing to dry winds, followed by a hot season, which appears to have been too much for them.

I have seven stocks. On three I tried sections, and supered three with frames for extracting; the remaining stock I left alone. The bees of one hive only worked in the sections, and herewith I send you a sample of the stuff they gathered, and shall be very glad if you will give me your opinion of it. I suspect it is so-called honey-dew, and will be glad if mistaken.

I have extracted just a little honey from comb; it is more like squeezing pellets of toffee from the comb than anything

else, and in colour nearly as dark as treacle.

As I had arranged to be away all August I took off the sections, though imperfectly filled and capped, feeling that if my suspicions were justified, it would be a greater kindness to relieve the bees of the "stuff," and feed them with medicated cane syrup instead. I will, however, await reply in B.B.J. before deciding.—J. W. D., Leamington Spa, Oct. 12.

REPLY.—The contents of portion of section sent is, as supposed, almost wholly honey-dew, and, as such, not fit for table use. Our correspondent must, however, not judge of bee-keeping from his first two years' unfortunate experience of the pursuit. To have adverse bee weather during the early gathering-time, coupled with abundant honey-dew later on, must be regarded as the exception rather than the rule; otherwise bee-keeping would not find the favour it does with so many. The bright side of our correspondent's case lies in the fact that the "stuff" of which he justly complains will do very well for the bees' use; consequently no trouble need be taken by way of extracting or feeding up for winter. We may also explain that if bees do not enter supers and store good honey therein, there must be good reasons for the failure—reasons that need no explanation to those who have had experience in the craft.

[3598.] *Uniting Bees without using Pacifiers.*—Will you kindly tell me how many hours you consider it necessary for two stocks of bees—tiered one above the other and parted by wire-cloth between—to remain so kept apart in order to acquire a uniform scent, for uniting peacefully but without using any pacifier such as flour or scented syrup? I united two lots after 48 hours, and there was not the slightest sign of fighting.—J. W. L., Keswick.

REPLY.—Probably 24 to 36 hours would suffice, but it is well to err on the safe side, if at all.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

G. W. M. (Sheffield).—Packing Bees for Winter.—1. With regard to coverings for frames, our own preference is for a single quilt of the thick grey felt used under carpets, laid on top of the piece of "ticking" next top-bars of frames; then over all a thick cushion of chaff. But as you have plenty of felt quilts, the chaff may be dispensed with, and about three coverings of felt substituted. 2. It will only be safe to discontinue feeding your weak lot of bees if they have already got sufficient stores to carry them over winter, say, 20 lb. of food. Otherwise you must make up any shortage by frames of food, or a good-sized cake of soft candy, renewed as often as required. 3. If unsealed food is given in frames, place the latter in centre of cluster for present use, leaving sealed combs on the outside.

JORGE A. D'ALMEIDA (Lisbon).—Seed of Chapman Honey Plant.—The gentleman who wrote the interesting article you refer to on the Chapman Honey plant in our issue of September 4 is at present abroad, but expected home shortly. If therefore you could meantime send us the necessary particulars how to forward a packet, we have no doubt Mr. Reid will oblige by handing us a little seed on his return.

H. POTTER (N. Brompton).—Books on Bees.—The first-named book is, as its title implies, an entirely scientific work, dealing only with "The Honey-bee, its Natural History, Anatomy, and Physiology." On the other hand, the other work you name is a complete "Guide Book" of instructions for the practical work of managing bees in modern hives. Both books are what you call "up-to-date," but quite distinct and different from each other.

Honey Samples.

HIGHLANDER (Lochgilphead). — Your sample contains so large an admixture of heather as to qualify it for the heather class on show-bench, but, being partly flower-honey, it has not the true consistency necessary to win a prize if competition was keen. It is of good flavour and colour.

J. SKINNER (Bristol).—The liquid sample is good in colour, but only of moderate flavour. That in granulated condition is much nicer in flavour, and as such more suitable for table use.

HUDD (Yorks).—Your sample is mainly from white clover. Quality good, but needs straining through fine muslin to remove particles of wax, etc.

Suspected Combs.

W. M. (Banff).—Bad case of foul brood, evidently virulent type.

J. W. B. (Kent).—The four sealed cells in bit of old comb do not contain the slightest visible trace of brood. We need a sample with some remains of dead brood to judge from with regard to disease.

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

The monthly meeting of the Council was held at 105, Jermyn-street, S.W., on Wednesday, October 19, Mr. T. W. Cowan occupying the chair. There were also present Major Fair, Dr. Elliot, Messrs. T. Bevan, W. Broughton-Carr, J. B. Lamb, E. D. Till, E. Walker, T. I. Weston, and the secretary. Apologies for inability to attend were received from Miss Gayton, Messrs. W. H. Harris, and H. Jonas.

The Finance Committee's report, presented by Mr. Weston, gave details of receipts and expenditure to date, and was duly approved. Cheques asked for by the Committee to meet liabilities were passed.

Reports upon examinations in Cheshire, Hunts, and Notts were received, and in accordance with the recommendations of examiners, it was resolved to grant certificates to Miss G. Wagstaff, Messrs. E. M. Greig, T. Johnston, and W. H. Stoppard.

The Chairman reported that in an interview with a representative of the Board of Agriculture it had been suggested that the Association should arrange for the preparation of leaflets on "The Preparation of Honey for Market," and "Bee-keeping for Beginners," for issue by the Department. The suggestion was unanimously approved, and arrangements made accordingly.

A meeting of the Committee appointed by the meeting of delegates of county associations, to arrange work *re* "Bee-Pest Legislation," followed the meeting of Council, and a number of letters on the subject were read and dealt with. Letters explaining enforced absence were received from Mr. G. M. Saunders and Mr. F. W. L. Sladen. A Sub-committee, consisting of Messrs. T. W. Cowan, T. I. Weston, Major Fair, and Dr. Elliot, was elected to amend the wording of the Bill where necessary; to draft such circulars as it may be deemed desirable to issue in furtherance of the object for which the Committee was appointed, and to report to the next meeting of Council on November 16. Meantime, the secretary was instructed to express to Mr. Saunders the hope that he would see his way to work with the Committee, and to refrain from the issue of circulars as an individual member of it.

CONFERENCE WITH COUNTY DELEGATES.

(*Continued from page* 416.)

The Chairman said the B.B.K.A. had been in close touch with the Board of Agriculture for a number of years, so that they knew what was being done. He had, in his official capacity as Chairman, visited the Board of Agriculture yesterday, and had mentioned the conference to be held that day. Further, he had made inquiry with regard to a promise, said to have been made by Lord Onslow, that he would introduce a Government measure dealing with Bee-pest or Foul Brood. Unfortunately Sir Thomas Elliott was absent through illness, but his private secretary was fully acquainted with the matter in question, and produced all the papers connected therewith; and after perusing Lord Onslow's letter he said it conveyed no promise at all. Nor was there any other letter, and no authority for saying that his lordship was prepared to introduce a Bill as a Government measure.

It was thus quite clear that so far as regards the Government taking up such a Bill it would depend entirely upon the evidence that could be brought forward in support of the proposed measure. Both Mr. Herbert Gardner and Walter Long, former Presidents of the Board of Agriculture, considered that the County Councils were the proper authorities for dealing with this matter. Bee-keepers must, therefore, obtain the consent of the County Councils to carry out and put in force any measure that might be proposed. In other words, if Lord Onslow saw that bee-keepers really desired legislation, and that the County Councils were willing to put legislation in force, the Board of Agriculture would, no doubt, be prepared to consider the question. On the other hand, if there was any opposition, it was not likely that Lord Onslow would move at all in the matter.

He (Mr. Cowan) then dealt with the Irish demand for legislation, and was informed that the Irish Board of Agriculture would not support foul brood legislation for Ireland. They appointed their own instructors and had their own scheme, which was working satisfactorily, consequently there was no necessity for change in Ireland at present.

Summing up the whole matter, the Chairman said, as regards the Board of Agriculture the position appears to be somewhat indefinite. Lord Onslow had made no precise promise and would only be induced to consider the question if a demand for Parliamentary action was shown to exist. So far, however, there was nothing before the Board to prove that bee-keepers really wished for compulsory powers for dealing with foul brood. At the same time it was made quite clear to him (the Chairman) that the Board of Agriculture looked to the British Bee-keepers' Association for information on this subject, and that if legislation was likely to follow it would only be effected under the initiative of the parent body. He thought it would be perfectly futile for any County Association to bring forward

a Bill apart from the B.B.K.A. Now, with regard to Ireland, he (Mr. Cowan) said it appeared to him quite illusive to suppose that the Irish Association could effect anything at the present time. The Irish Bee-keepers' Association, once a powerful one with a large membership, had, he understood, dwindled down to about one hundred members, so it was not surprising that it has little influence in the present effort for legislation. In fact, Mr. Wyndham has already stated in the House of Commons that the Department of Agriculture did not intend to ask for legislation until the measures it was taking—of which he (the Chairman) had already spoken—and which were now effectively working, had failed. In point of numbers, the whole of the Irish Association mentioned in Mr. Saunders' circular probably did not reach a higher total than some of our largest associations in England; and it was not to be wondered at if their influence was lessened on that account. He, therefore, felt that, however unfortunate it might be for their friends in Ireland, our cause would be, not advanced, but retarded, if joint action was adopted. The best course for English bee-keepers was to ask for their own Bill, and Irish bee-keepers could ask the Government to extend it to Ireland.

Mr. Saunders, interposing, said not only had the Irish associations moved more County Councils than the English ones, but they had for some time past secured compensation (5s.). The Irish Board had employed the Association experts for a long time, and there was now an alteration in the attitude of the former towards the associations. In reference to the "distinct promise" of Lord Onslow, naturally the Board would commit itself to as little as possible; but he had quoted Mr. Lowther's letter, which had appeared in print for anyone to form his own conclusion. Sir Thomas Elliott's secretary said the Government had not been approached; but what about the Devonshire petition? He (Mr. Saunders) was afraid he must continue to work alone, as he was pledged to Ireland.

The Chairman said he was given distinctly to understand that there was no petition either from Devonshire or Lincolnshire. He believed that Irish County Councils would have great trouble in obtaining money for the purpose of carrying out an Act if they had one. Mr. Wyndham had said that the funds at disposal for Ireland had been hypothecated up to the hilt for education and other purposes. It could hardly be said that the Irish Board of Agriculture was in great favour at present, for, according to the Chief Secretary's statement, its chief claim to support was that last year it had been instrumental in giving 719 lectures on bees, poultry, and other subjects. These, however, cost £18,000, which works out at about £25 per lecture. Many of those lectures were very poorly attended, so that the expenses on their account were out of all proportion to the work done.

The following resolution was then proposed by Mr. Hinde (Cheshire) and seconded by Colonel Walker:—

"That a committee be appointed to further the objects of the last resolution."

This was carried by a large majority, 28 voting in favour of it and 5 against.

Mr. Dawson proposed and Colonel Walker seconded:—

"That the Council of the B.B.K.A. form the committee, with power to add to its numbers."

Carried unanimously.

The addition to the committee of Mr. Geo. M. Saunders, Mr. F. W. L. Sladen, and Mr. Richard Brown, of Somersham, was then proposed and seconded in due form, and carried *nem. con.*

Mr. Weston said that, having now appointed a committee to carry forward their objects, it would only be reasonable to ask the general body of bee-keepers to give their aid towards the expenses of the work to be undertaken. The income of the B.B.K.A. was already apportioned up to the hilt, and there was a good deal of work before them; therefore, if the matter was to be pushed forward with energy, the pecuniary support of apiculturists was required. He therefore begged to propose the following resolution:—

"That this meeting instructs the Committee to ask for support from the general body of bee-keepers in aid of the endeavour to promote legislation for prevention of Bee-pest."

Mr. Carr seconded the proposition, which was carried unanimously.

The Chairman said there were already 29 associations which could send their delegates to attend as *ex officio* members of the Council, and 21 members of the Council of the B.B.K.A. An unwieldy committee was not desirable for many reasons, one being the expense of sending out notices. Now that the principal business of the Conference had been done, he would like to hear the subject of compensation discussed. The compensation at present suggested was 10s. per hive. Personally, he thought that too much, as a diseased hive that was only fit for destruction was worth nothing at all.

Colonel Walker remarked that he had already suggested in the B.B.J. that compensation should be reduced to 5s. His principal reason was that pecuniary difficulties would most probably arise when county councils found they would have to

increase the rates. The destruction of a hive and its contents would not take place until found to be worthless, because if the hive be diseased, but capable of treatment, the experts would try to save it. It was quite true destruction would come hard on a poor cottager bee-keeper; but one must not look too much to Government compensation. If the Government gave 5s., the associations might perhaps join together and increase the amount in hard cases.

Mr. Saunders was in favour of 10s. There would be instances in which new combs costing more than 5s. were attacked by disease, and to set the man up anew with all he required would involve greater expense, and 10s. was little enough.

Mr. Edwards thought that no compensation at all should be paid where a worthless colony was destroyed. Foul brood could generally be cured if the stock was a good one. There was the question of starting afresh with new combs and new foundation. Would it not be possible for the inspector to provide those new combs, etc.? The Bill allowed of the compensation being varied according to the circumstances of the case.

Mr. Allen Sharp said if no compensation was offered, who would report their diseased stocks to the authorities?

The Chairman replied that county councils would have power to compel notification.

Mr. W. Woodley foresaw great difficulty in proving neglect. Take the case of cottagers' skeps!

Colonel Walker doubted not that under the advice and management of Mr. Saunders all would go well in Cumberland; but in counties where there were no experts at all the case would be different. He did not think Government, as represented by the county councils, would, in dealing with public money, be content with the reports of experts. But in cases where they were satisfied the maximum compensation would probably be paid to save trouble. He therefore feared the fixing of 10s. as compensation would hinder the passing or adoption of the Act. It was found in Devonshire that the poorest bee-keepers had no objection to the destruction of these hives.

Mr. Dawson suggested that these details would be far better discussed by the committee.

The Chairman said they ought to bear in mind that inspection in England would cost more than it did in America, the reason being that bee-keepers in this country were closer together, and there were fewer hives to supervise. In America the inspector went direct to one place, where he would have 200 or 300 hives to inspect, after which he would probably have to go 100 miles to another locality. In England he would have to go from one place to another every day, looking at a few hives in each instance.

Mr. Edwards said in view of the decision of the meeting to appoint a committee, he, in the absence of the mover, took upon himself to withdraw Mr. Stoneham's resolution, which he (Mr. Edwards) was to have seconded.

Mr. Weston said the Board of Agriculture undertook to gather together farming statistics in the country. Might it not be asked to include therein particulars about apiculture? At the present time all that was known was the subscribing members of associations, who did not form a tithe of the bee-keeping world. There were only two associations whose experts went out into the by-ways and hedges and found out unknown bee-keepers.

The Chairman some time ago had an interview with Major Craigie, of the Board of Agriculture, on the question of statistics, and it appeared to be possible, in a sparsely populated country like Ireland, to obtain statistics, which were collected by the Constabulary, but it could not be satisfactorily done here. Even the agricultural statistics in England were only approximate, and could not be relied upon, for the majority of persons did not sign the printed forms sent to them. The Board was therefore not disposed to add bees to the form at present, because it saw no way of getting information about them, especially as accurate details regarding cattle and horses even were not obtainable.

Mr. Crawshaw suggested that the associations themselves were the people to supply such particulars. Their experts could be easily instructed to obtain them.

Mr. Saunders said the Cumberland expert visited all bee-keepers in the hope of getting information about foul brood. So, he believed, did Cheshire and Devonshire.

Mr. F. B. White said he could never gain any reliable statistics, because people were constantly leaving the county and going somewhere else. He himself had scoured districts all over Surrey, but on a second visit many of the bee-keepers had gone away.

Mr. Edwards said the Berks B.K.A. had endeavoured to secure statistics with the aid of the county council grant, but the cost was prohibitive.

Mr. Waterfield (Leicestershire) asked who would be the body to approach the county councils and ask for the Bill?

The Chairman replied that it would be impossible for that meeting to say what the committee would do. The natural order of procedure was to get the county B.K.A. to approach the county council in all cases where they were in touch with those public bodies. The parent associa-

tion would certainly feel that it was interfering with the branches if it were to appeal to the county councils, and would only do so where no associations existed.

Mr. Waterfield (Leicestershire) thought if the new committee were going to approach the county councils the association had better not do so.

The Chairman said that Leicestershire would be quite right in communicating with its county council. The B.B.K.A. would no doubt appeal to other associations to act similarly.

Mr. Hibbert suggested it would be better for the B.B.K.A. to draft the form of letter that the counties should use to approach their county councils. That would ensure uniformity of question and answer.

Mr. F. B. White said surely the counties were not too helpless to formulate their own appeals to the county councils.

Mr. Saunders thought the different county councils had already been applied to by the branches.

This concluded the business of the meeting, and

Mr. Hinde proposed and Mr. Dawson seconded a vote of thanks to the Chairman, which was carried amid cheers.

The Chairman returned thanks, and expressed his acknowledgments to the audience for attending in such numbers that evening. He hoped that all trace of feeling and rivalry was now obliterated. The parent body tried to keep in touch with its affiliated associations, which latter now had the opportunity of showing what they intended to do. He could say nothing definite about the Bill being passed; it might or might not—no one could answer for that; but he was sure the Council of the B.B.K.A. would meet the other members of the committee and discuss in a spirit of cordiality every part of the measure and the best methods of carrying it out.

Mr. Saunders wished to say as a last word that he was bound to a certain course. He could not abandon the Irish.

The Chairman replied, now that the meeting had unanimously appointed a committee to undertake and carry out the task, it must be for them to decide all questions regarding the Bill, and whether it should extend to Ireland. Mr. Saunders would, of course, as a member of the committee, have every opportunity of stating his views and having them discussed.

[Mr. Geo. M. Saunders again writes under date October 22 asking us to make certain alterations, additions, and corrections in connection with his statements as reported in B.B.J. We need only say that our reporter took full notes of what was said at the meeting, and—without being a *verbatim* report, which is, of course, out of the question—will vouch for the general accuracy of his report. We cannot, therefore, burden our already overcrowded pages with more than a column of explanations or "corrections." The matter is now in the hands of a committee, who will, we trust, deal with it in a manner satisfactory to those by whom it was appointed.

If Mr. Saunders wishes, we will hand his letter over to the secretary of the B.B.K.A. for the committee to deal with

The hon. secretary of the Derbyshire B.K.A. also writes at some length taking exception to certain words on page 403 of B.B.J. of the 13th inst., which appear in his letter addressed to the secretary of the B.B.K.A. on foul-brood legislation. Seeing, however, that the letter in question was read out in full to the meeting by the Chairman, there could be no misapprehension on any side with regard to the attitude of the D.B.K.A. On the other hand, the Chairman's speech, as reported on pp. 402-3, was a correct summary of the replies received from the various associations who had been communicated with, as the delegates of the Derbyshire B.K.A. will no doubt confirm when reporting to their association in due course.—EDS.]

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

AMONG THE BEES.

SOME USEFUL HINTS.

[5662.] *Waxed Paper.*—I know of no neater, cleaner, cheaper, or more effective packing for sections than these sheets of waxed paper cut to size required. Lay the sheets down on your table or bench, place the section in the centre, split side down, double up paper, and turn up section as it was on hive. The weight of the section seals the ends quite effectively, while the sides are automatically drawn together when the sections are being parcelled in brown paper. After a long journey they come out neat and clean. If there has been any slight drip the waxed paper keeps it from smearing other sections. Being semi-transparent, the appearance and finish of the sections may be seen at a glance. I would not be without them, although they cost double. The charge is 5s. per 1,000. Why do not all dealers stock and catalogue them?

"*Honey with Care.*"—Few seem to advertise these indispensable labels, one of

which should be gummed or tacked on each box sent by rail containing comb-honey. The one I use has "Comb Honey. With Great Care. This Side Up," printed in bold black letters on a bright red ground, each intimation on a separate line. I would also like to see on it or separately "Agricultural Produce Rate," or "Half Parcel Rate," in fairly prominent type.

Picture Postcards.—How is it that some enterprising dealer has not issued a series of these dealing with bees, bee-keeping, and honey? There is an open field here for somebody, and a clever artist might give us something bright and attractive which would prove a means of advertising the bees and their produce, and so make honey and its uses more widely known. The ignorance of even intelligent people in regard to bees and their ways is extraordinary, and anything which would tend to spread the light would be a boon. The other day a "professional" man told me he had fed his bees in spring on "barley-sugar-candy"—a compound, I suppose, of molasses and glucose—and he wondered why they did not show progress, but rather dwindled away. From his own description I have no doubt he had unintentionally given his bees a severe attack of dysentery.

Packing Material.—I have hitherto used hay or straw indiscriminately when packing sections, but, seeing lately that some authorities taboo hay, I should like to learn if those who pack in quantity agree that it is "six of one and half a dozen of the other." I can imagine that simple meadow-grass, or that of natural growth, might be less springy and pack down too dull and dead to be efficient as a resilient agent to break the effect of a sharp jerk or jar, but I think good hay, with a large percentage of rye-grass, makes an excellent packing material. Fairly rough wood shavings answer the purpose well, I believe, and I lately learned that many use heather in preference to other material.

Are you Ready for Winter?—Have you all your hives winter-packed ready for the season of repose? Is each colony headed by a fertile queen, and is that one who is not already worn out? Are your hives packed with that best and most thorough material for safe wintering—bees? Are you certain that any feeding required was done before the advent of cold weather, so that the bees could mature and seal it over, as all winter stores should be in October? Have you tested every hive-roof to insure that it is thoroughly water-proof, that no leak, however small, exists to allow the insidious, gentle percolation that may prove the undoing of the colony? If so, leave the bees severely alone for nearly six months without any internal disturbance whatever.

Our Appliance Dealers.—How is it that these experts are so silent, and that they so seldom contribute to the pages of the BEE JOURNAL? In the new year, so soon to be with us, could we not have a monthly "Dealers' Page"? Let the Editor cast lots as to the order of precedence, and give carte blanche to each dealer as to what is to appear. Each might sing his own praise as loudly as he pleases if he deems it wise, and puff his goods to the sky, if he has a mind. One could declare his shilling-priced new invention "worth a guinea"; another, lauding his chief speciality, could maintain it was the best "on the five continents"; while a third could swear his 5s. article "was worth £5." Seriously, however, and joking apart, I think a monthly "Dealers' Page" would be a success.

A New Recruit.—According to the *Daily Mail*, Sir A. Conan Doyle is to cease writing after this year ends and retire to some quiet country residence to spend his time in peace and happiness. The report says: "He will take a little place and go in for bee-keeping." I venture to prophesy that if he does so, we may count on our pages being enriched by his pen, and I should not wonder if the author of "Sherlock Holmes" may yet add to the literature of bees a work to rival that of Maeterlinck.—D. M. M., Banff.

FOUL BROOD AND EXPERTS' WORK.

[5663.] I can give and substantiate cases where the owners of diseased hives have been offered either full money-value or healthy stocks to replace same, and all in vain. In one case £5 was offered for a single stock in order to destroy it; and the offer was refused.

County councils spend the funds available to them on technical instruction, and could not give money to supply hives at half-value as some have proposed in your pages. Then with regard to efficiency of experts. There is no doubt that if the county council and the local B.K.A. could combine to engage with a salary sufficient to entirely support an expert, really efficient work would be secured. In conversing with a county councillor last summer on the question of foul brood, his forcible comment was, "Put forward a practical scheme and we will support it." The question arises—What is meant by a practical scheme? I might venture to enumerate the following as points for consideration:—(1) That the expert's visit be considered as "technical instruction" (this is done on allotments in giving instruction in fruit-culture), as per enclosed slip from an expert's visiting-book, and that these slips be included in all county council reports. (2) Expert advice can be given the year

round by letter. I have this year written scores of letters without payment or reward beyond the advancement of the association I was working for. Letters so written might be included in the county council report, and go towards justifying expenditure on the expert's salary. (3) A model apiary under control of the expert available for inspection by intending bee-keepers who could see what is needed in modern apiculture. (4) At this apiary various experiments could be conducted with special reference to the conditions prevailing in the county with reference to apiculture. (5) Lectures on bee-keeping are already recognised as technical instruction, and must of course be continued. (6) It is self-evident that if the Foul Brood Bill became law a great part of the expert's time would be occupied in making special visits when notified of diseased stocks requiring inspection, which would often mean a long journey and work at the end of it.

Surely the above rough outline is sufficient for a county B.K.A. working in conjunction with the county council to fully employ an expert all the year round in giving technical instruction and acting as inspector. I have no hesitation in saying a scheme formed on the above lines would be considered sufficiently practical to approach a county council with, and make a distinct advance in apiculture, and with the compensation clause left out it ought to prove a workable scheme.

Is it not possible, I ask, to overrate the danger from foul brood germs until we spread alarm enough to create a reign of terror among bee-keepers? My own conviction is—as I have already said in the B.B.J.—that the greatest cause of contagion is robbing; next to that, interchange of frames from diseased to healthy stocks by persons ignorant of the nature of foul brood. We cannot control the flight of the bee nor the natural propensity of the insect to seek sweets even by robbing; hence our only safe resource is to compel destruction of foul brood when necessary.—J. Gray, Expert B.B.K.A., Long Eaton.

GOOD REPORT FROM YORKSHIRE.

[5664.] Not having seen any report in B.B.J. of the past honey season in this part of the country, a short account of the doings of my bees may possess interest for your Yorkshire readers. I began the season with 28 stocks, some of which were only weak until July, when they pulled up wonderfully. I took 250 well-filled clover sections of good quality, very few of which were spoiled with honeydew. I extracted from the unfinished sections about 80 lb. of good saleable clover honey. I work only for sections, not having a ready sale for extracted. Swarming I was not troubled with to any extent; in fact, only six came off in all. With regard to our heather season, I took the bees to the moors (a distance of fourteen miles) in the second week of August. Unfortunately, the weather was not at all favourable until the 26th of that month, and then we had a fortnight of splendid bee weather, during which three or four of my hives filled two racks of 21 sections each. I got from our second harvest at the moors altogether 350 finished sections and over 100 lb. of extracted honey. The hives are in splendid condition for winter, averaging over 30 lb. each in brood chambers. The frames are solid blocks of honey. Wishing equal success to all bee-keepers—Henry Waddington, Borobridge, North Yorks, October 22.

[We congratulate our correspondent on his good fortune this year, which is, we imagine, exceptional, judging from previous reports from Yorks.—Eds.]

DRIVEN BEES.

[5665.] My experience is that even single lots of "driven bees" can be worked up into really strong, paying stocks, especially if they are from hives that have given off a swarm. Then one is assured of a young queen. Though I consider the bees should be crowded to not more than four frames of ready-built worker-comb at start, and one or two frames of foundation, or, better still, empty combs added as required. They need feeding on alternate evenings for a month, by which time there ought to be a considerable number of young bees. The stock may then be left till end of March and again fed twice weekly till supering time. In this way I have the bees covering twelve to fifteen frames, and they do quite as well as established stocks. It should be borne in mind that there is as much comb-space in four frames as in the ordinary skep, also that there are 648 cubic inches of comb space in four frames, and seldom more than 700 cubic inches total measure in the ordinary skep. At least, that is the measure of a considerable number of empty skeps I have. I much prefer to drive bees direct into hive-boxes holding five or six frames, it is more expeditious and workmanlike. — A. H., Wavenden, Bucks, October.

FOUL BROOD IN CHESHIRE.

[5666.] I was surprised to see Mr. Hinde's statement on page 411 respecting foul brood in Cheshire. To my fellow-Cheshire bee-keepers I say, whatever are we all doing, if our friend's remarks are correct? Surely we must have foul brood

in a form such as few other counties can have ever seen! But, as a humble bee-keeper of twenty years' experience in the craft, and having visited a good many others, both successful and unsuccessful, I have fortunately never seen so sad a state of affairs in our county. It is no doubt a serious matter when only one stock is affected in any locality; but, according to my experience, the owner of such stock (even if one of the stupid folk) can generally be approached, and persuaded that it is to his own advantage to have this stock dealt with so that there may be no risk of infection.

I always find bee-keepers — whether members or non-members of the Association—willing to have a chat about their hobby, and frequently this leads to an examination of the apiary with him, and very enjoyable it is to pass an hour in this way with one's fellow bee-keepers, even if not a member of a County Association, giving assistance or receiving helpful hints as may be required on either side.

I fully believe most bee-keepers in Cheshire are in favour of legislation upon the foul-brood question, though their reason for being so is not because we are so seriously affected, as Mr. Hinde may lead outsiders to believe. Personally, I feel confident that more than three-fourths of our Cheshire bee-keepers have never seen an affected cell. My hope is that they may never do so.—POTTS, Dutton, Warrington.

LATE-REARED ITALIAN QUEENS.

[5667.] Replying to Mr. C. Clarke's letter (5661, page 419), I have only one of the young Italian queens left. Two disappeared, the third I destroyed, and I intend to keep the other till spring to see how she turns out. She has not laid yet, and the colony (Italians) have all but ceased work. I shall be quite prepared for a failure. A very curious incident has occurred in one of the colonies in question, a rather small swarm of blacks. I took their queen away and gave them one of the young Italians, which they accepted all right, but she subsequently disappeared, and although I looked for her several times, I could never see her or any trace of a queen. But when I came to unite them I found on one comb a small patch of irregular brood. Some of the cells contained two or more eggs. A few of the more advanced ones were bulging out into drone cells, but what was more curious, they had a very small fully capped "queen cell." I have had a fertile worker before, but did not know that they would try to raise a queen from the eggs of such a one. I send name and sign—ITALIAN, Worcester, October 24.

REVIEWS OF FOREIGN JOURNALS.

By "Nemo."

Bee Nomenclature.—We read in *Gleanings* that an attempt is being made in America to change the scientific name of the honey-bee, *Apis mellifica*, to *Apis mellifera*. The leaders in this crusade are Professor Cork and F. Benton, and they base their arguments upon the fact that Linnæus himself gave the name as *Apis mellifera* before he corrected it to *Apis mellifica*—the name by which our honey-bee has been known ever since up to the present time—and that by the "Canons of Zoological Nomenclature" the law of priority should be rigidly enforced, and should date from 1758. Now it happens that Linnæus named the honey-bee *Apis mellifera* in his *Systema Naturae* in 1758, but later, finding he had described it incorrectly as a honey-bearer, he changed it in 1761 to *Apis mellifica*—honey-maker. This name has been universally adopted, but in 1896 Professor K. von Dalla Torre pointed out that Linnæus had called the honey-bee *mellifera* before *mellifica*. Mr. Benton writes as though the change had been adopted, but this is an entire mistake, for it is recognised that Linnæus, as he gave the name, had a perfect right to change it if he found it was not correct. Moreover, the Congress recommended certain rules, but it could not enforce them; they were not binding, and it is recognised that there must be certain exceptions, otherwise we should be led into adopting numerous absurdities. That is why European scientists still retain the name of *Apis mellifica*, and are not likely to change it, notwithstanding Dalla Torre's discovery or the attempt of Mr. Benton and our American friends to substitute another. Common sense and reason will prevail in the end, and we see at last Dr. C. C. Miller pleading that more respect be shown to the wishes of Linnæus himself by retaining the name by which the honey-bee has been known up to the present.

Stingless Bees.—M. D. Halleux alludes to these bees in *L'Abeille et sa Culture*. Recently an explorer in South America stated that he had discovered stingless bees in Venezuela about the same size as our honey-bee, and of a beautiful yellow colour. A colony of such bees sent from Brazil to the editor of the *Bienen Vater* in Vienna only lived until January, notwithstanding that every effort was made to keep them in a similar temperature to the climate that they had been used to. M. Halleux says these bees are of the genus *Melipona*, and although they have no stings they can defend themselves in other ways. They attack fiercely and bite with their powerful mandibles. In Cen-

tral America there are varieties that bite so cruelly and with such ferocity that they are quite as formidable as our most vicious colonies.

Winter Food for Bees.—We read in the *Oesterreichische-ungarische Bienenzeitung* that all honeys that granulate early in the season are unfit for wintering food for bees. For example, the editor mentions honey from rape, pines, and honeydew. It entails much labour on the bees to dissolve the crystals or granules, and they often do not find the necessary moisture in the hive. The result is a thirst during a period when it cannot be satisfied. On the other hand, bees winter well on honey stored late in the season and on sugar syrup.

Bees in Orchards.—An editorial in the *American Agriculturist* says that the editor keeps his bee-hives in the orchard, and has found both bees and fruit trees profited by this conjunction. It was thought that the bees were the offenders when punctured and decayed fruit was seen, but, he says, bees cannot and do not mar the skin of sound fruit. The depredators were found to be either birds or insects, or some other enemy, that did the damage first, and then the bees took their turn at the decayed fruit to extract the juices. The bees are the principal agents in carrying pollen from blossom to blossom, thus adding largely to the quality of the fruit.

Spraying Fruit Trees.—In the same journal we find it recommended that spraying of fruit trees should be done before the blossoms are open, as the poisonous liquids used to kill the obnoxious insects can then do no other harm. The practice of spraying when the trees were in full bloom not only destroys the insects, but the honey-bee as well, and does more harm than good.

NORTHUMBERLAND AND DURHAM B.K.A.

ANNUAL HONEY SHOW.

The Northumberland and Durham Beekeepers' Association held its sixth annual show on October 8 in the Y.M.C.A. Institute, Newcastle. The entries numbered between seventy and eighty, and, considering the character of the season, the quality of the honey staged was excellent. Beeswax was also shown in good condition, and in fact there was fair competition in all the seventeen classes. The judges were Messrs. J. N. Kidd and C. Thompson, who made the following awards:—

Observatory Hive, with Bees and Queen.—1st, J. Walton, Blackhill; 2nd, J. Hope, Corbridge.

Six 1-lb. Sections.—1st, J. Scougall, Bedlington; 2nd, J. Harding, Trimdon; 3rd; Jas. Bell, Branxton; h.c., R. Robson, Wooler; c., Miss Carrick, Coatham Maudeville.

Six 1-lb. Jars Extracted Honey.—1st, R. Robson; 2nd, J. Harding; 3rd, J. Scougall; h.c., W. Milne, West Hartlepool.

Six 1-lb. Sections (Heather Honey).—1st, Jas. Bell; 2nd, W. Cowans, Rothbury; 3rd, R. Robson; h.c., L. Richardson, Whickham; c., T. R. Jackson, Corbridge.

Six 1-lb Jars Heather Honey.—1st, Wm. Milne; 2nd, J. Scougall; 3, W. Cowans; h.c., A. Smith, Consett; c., J. L. Dent, Burnhill.

1-lb. Section (Heather Honey).—1st, Wm. Cowans; 2nd, R. Robson; 3rd, L. Richardson; h.c., J. Hope.

Non-Sectional Super (Heather Honey).—1st, W. Cowans; 2nd, G. Rochester, Blackhill.

Super of Heather Honey. — 1st, Wm. Cowans; 2nd, G. Rochester; 3rd, W. Wright, Benwell.

SPECIAL PRIZES.

Three 1-lb. Sections, 3 1-lb. Jars Extracted Honey, 3 1-lb. Sections and 3 1-lb. Jars Heather Honey.—J. Walton, Blackhill.

3-lb. "Walton" Section Heather Honey.—1st, J. Walton; 2nd, W. Cowans; 3rd, W. Armstrong, Blackhill.

Two 1-lb. Heather Sections.—1st, L. Richardson; 2nd, R. Robson.

Non-Sectional Super (Heather Honey).—1st and 2nd, J. Waddell, Alwinton; h.c., W. Cowans.

Beeswax.—1st, W. Cowans; 2, J. J. Harding.

Super of Heather Honey (members only).—1st, J. Walton; 2nd, W. Armstrong.

Three Heather Sections (members only).—1st, A. Smith; 2nd, J. Walton; 3rd, W. Armstrong.

Silver Medal for most points in all classes.—W. Cowans, Rothbury.

In the course of the afternoon Mr. Jas. Waddell, the courteous and energetic secretary, was presented with a handsome secretaire for himself and a silver teapot for the lady who has recently become his wife, token of the esteem in which he is held by the members.—(*Communicated.*)

Queries and Replies.

[3599.] *Bacillus Alvei under the Microscope.*—Many thanks for your prompt answer to my inquiry re foul brood, and

advice thereon, which I have acted upon, and trust that I shall see no more of the pest. A friend, who is a veterinary surgeon, showed me a day or two ago, under a microscope, the blood of a horse that had died from anthrax, and I remarked that it seemed as virulent a disease among animals as foul brood is among bees. He told me that if I knew how to treat and prepare the germs of foul brood he would put some under the microscope for comparison with the anthrax. I saved a few cells from the diseased hive, and should be greatly obliged if you would tell me what formula has to be adopted, for I should be greatly interested to see the germs under the glass. I send name for reference and sign—BILL BAYLEY, Shrewsbury, October 11.

REPLY.—Spread some of the matter diluted with sterilised water in a thin film on a cover-glass. When dry, pass two or three times over flame of spirit-lamp. Float cover-glass, film downwards, on staining solution, methyl-violet by preference, allow to dry spontaneously and examine under 1-12 inch objective.

[3600.] *Contracting Hives for Winter-preserving Store-combs.* — I shall be much obliged if you can help me on the following point. When packing up my bees for the winter I had to remove two or three combs from several hives, as there were not sufficient bees to cover them all. The result is that I have a good many spare combs partially filled with sealed honey, also several with a little unsealed. I should like to be able to give these combs to the bees in the spring, but do not know how to keep them through the winter. At present they are in a cupboard in the kitchen, as being the warmest place. I therefore ask: 1. Is this the best thing to do? 2. If the honey granulates even there will it make the combs unfit to give to the bees, and if so, why? I could extract the honey, but this leaves the combs in such a mess, and it is too late to give them to the bees to clean up. Please advise me as to the best thing to do. I send name, etc., and sign—GRIP, Ellon, N.B., October 20.

REPLY.—1. Yes. 2. Any unsealed honey in frames—removed from hives and preserved as store-combs—should be extracted before storing combs away for future use. Granulated honey in combs is unfit for feeding purposes, because the bees cannot use it as food, and if given, they will cast the dry granules out of the hive after removing the small portion that is moist or damp. It is, of course, preferable to have combs cleaned up by the bees before storing away, but the "mess" (as you term it) after extracting is of far less moment than the granulated honey would be.

[3601.] *Impervious Coverings for Frames in Winter.*—Can you tell me whether "ticking" is better than American cloth for covering brood frames in winter? I have now the latter material placed on top bars of frames, shiny side down, and three quilts on top. I do not want to disturb the hives at this season unless necessary. —C. S. K., Brecon, October 21.

REPLY. — Our preference is for porous coverings for frames in winter, as it is an undoubted advantage to provide ventilation without a through draught. The removal of the present impervious coverings and substituting one of ticking, need not take more than five minutes per hive, and if done on a fine day the disturbance would do no harm whatever.

[3602.] *Foul Brood; the Cheshire Cure.*—Can any of your readers inform me definitely what was the strength of the "Phenol" used by Mr. Cheshire in the case of foul brood? I well know he used phenol; but what I want to be certain of is, was it "Calvert's," or whose? and was its strength No. 1, No. 2, or what? I send name, and sign—OLD CAMBS. BEE-KEEPER, Royston, Oct. 15.

REPLY.—The late Mr. Cheshire used "absolute phenol"—i.e., pure carbolic acid in crystals, which can be obtained from any chemist.

[3603.] *A Question of Foul Brood.*—I am again going to ask you to give me your opinion as to whether the comb sent shows a case of foul brood or chilled brood? It does not seem to bear the characteristic signs of foul brood as I understand the same, but I cannot make out why there should be so many similar cells in most of the combs the hive contains. Almost all the larvæ seem to have died at about the same age, which inclines me to think the brood must have been chilled, when I opened the hive in the summer to change the queen—which was an old one. A lot of workers' cells were in the same condition, but I saw no trace of young larvæ dead; and although the contents of cells seemed watery, there was nothing sticky or "ropey" about the same. It is rather strange that, although I have kept bees since a lad (that is, for some fifty years), I cannot say that I have ever seen a case of foul brood, and I have had hives in various parts of England as well as here (Scotland). Being doubtful of my own judgment in the matter I shall much value your assistance. —JOHN A. BOSWELL, Bridge of Allan, N.B., October 20.

REPLY.—The sample of drone-comb sent contained only chilled drone-brood. It is

a curious fact that dead drone-larvæ, even when taken from a hive affected with foul brood, never show the marked characteristics—either in colour or ropiness—such as are seen in worker-brood from a diseased colony. It would almost seem as if the bacillus does not propagate or thrive in the former as in the worker larvæ. Anyway, we can only record the fact as we have found it, after an experience probably as great as that of anyone in this country.

[3604.] *Queens Hatched at End of September.*—I should like you to give me your views on the following, as I must admit the case is puzzling me not a little. In September, on overhauling a stock along with a friend, we found about a dozen empty queen-cells, and on closer examination came across a young queen, which, as there was a little brood left by the old queen still unhatched, we concluded that the young queen must be unmated, and with no chance of mating, the drones having been all killed off, we, therefore, destroyed the newly-hatched queen and joined to the stock a little lot of bees, the queen of which was duly accepted, as a good patch of eggs was found a few days later. The stock in question was not again disturbed until last week-end, when, on opening the hive to give candy, along with several others, two queen-cells were noticed, one torn open at the side, but the other, a very fine cell, seeming to have recently had a queen hatched out of it, the usual symptoms after birth of a queen being plainly seen. I lifted out the frame and found both eggs and brood, and would therefore like your opinion as to whether a young queen has hatched out and got mated by some chance, or, as seems more probable, the queen accepted in September is still laying; but, in the latter case, why the queen cells? It may be thought they were some of the cells seen in September; but my friend (an expert, by the way) pulled down all cells found at that time. The day was too chilly for a full overhaul of combs, but the first warm, sunny day I will examine and report results.—I send name and sign—Dromio, Altrincham, October 19.

Reply.—It seems certain that the brood now in combs is the progeny of the queen joined to the colony at end of last month. Therefore, we must conclude that your friend, the "expert," must, by some oversight, have missed a couple of cells, as he might very pardonably have done after removing a dozen or so. Anyway, the bees would certainly not be likely to build queen-cells in October after having accepted a laying queen and being busily engaged in rearing brood from her eggs.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

Jno. Ward (Logwood Apiary, St. Lucia, W.I.).—Mead-making.—The Rev. G. W. Bancks' pamphlet on "Mead and How to Make It" (as advertised in this issue) affords all the information you desire, which we could not give space in this column for. It will be sent to the West Indies at price quoted—viz., 2½d. in stamps.

"Lilac" (Derby).—Preventing Granulation of Syrup-food.—Do not use tartaric acid at all; the best and simplest thing for preventing granulation in bee-syrup is vinegar in the proportion given in "Guide Book" recipe for bee-food.

Conservative Wild Bee (Herts).—Stray Swarms and Foul Brood.—Our correspondent may rest quite easy in his mind on such matters as "destruction of trees" and "spoiling of ancient buildings," so far as regards such evils being likely to result from a Foul Brood Bill, if such is ever passed in this country. His protest, therefore, is hardly needed in print.

G. C. (Worcester).—Foul Brood and "Bee-Life."—Disease (including foul brood) is as "separable from bee-life" as all diseases are separable from human life. There is no immunity in either case; while in both disease can be in some degree avoided or cured by the use of proper preventives or remedies.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul Brood."

We urgently request that all letters sent with samples of suspected comb be put outside the tin or box containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.

In urgent cases (and where possible) we undertake to "wire" replies at to F.B. if six stamps are sent to cover cost of telegram. All letters should be addressed "Editors," not "Manager."

J. W. B. (Maidstone). — Your second sample is no more convincing than the first, seeing that the only four sealed cells are perfectly empty, any former contents having dried up and disappeared. Some of the other partly-filled cells contain pollen, but there is no trace of foul brood in comb.

R. C. Carew (Waterford).—No trace of foul brood in comb sent.

Honey Sample.

M. Stone (Wellington, Som.). — Your sample of granulated honey is mainly from white clover, and the quality is very good indeed.

Editorial, Notices, &c.

FOUL BROOD LEGISLATION.

The sub-committe mentioned on p. 421 last week met on the 19th ult. and decided on certain amendments to the proposed Bill to be sent to the Board of Agriculture for acceptance or revision as may be required. In furtherance of this matter the Chairman of the B.B.K.A., who presided at the meeting in question, called at the offices of the Board respecting the proposed amendments. In course of an interview which followed, the Chairman was informed that the Board had received a resolution from the Lindsey (Lincs.) County Council in favour of legislation, and a petition from the Devon B.K.A. asking for legislation.

The Chairman then drew the attention of the Board to a statement which appeared in the *Daily Telegraph* of October 28, and was repeated in many provincial papers, and which read as follows :—

PROTECTION OF BEES.

The Earl of Onslow, Minister for Agriculture, has informed the Rev. Herbert Newman, hon. secretary of the Bishop's Stortford Bee-keepers' Association, that he is willing to introduce as a Government measure a Bee-Keeping Foul Brood Bill on similar lines to the Diseases of Animals Bill, provided that the county councils request him to do so, and agree to adopt its provisions when the Act is passed.

After due inquiry the Chairman was officially informed that "the President knows nothing about this."

We need hardly say how misleading statements like the above, when appearing in a leading paper, and repeated *ad libitum*, add to the difficulties—already numerous enough—of the committee appointed to deal with so complex a subject as a Bill to go before the House of Commons.

BEE-KEEPING IN IRELAND.

We have received a copy of the 13th Report of the Congested Districts Board for Ireland, in which we find the following under the head of bee-keeping:—

"Eleven years have elapsed since we commenced to provide instruction in bee-keeping and to sell hives and appliances. Up to March 31 last 1,349 hives had been sold in the Congested Districts; most of these were of the well-known 'C. D. B.' pattern adopted in 1893.

"In 1900 we issued a manual of Instruction in Bee-keeping, written by our Bee-keeping Expert. This book is of a convenient pocket size, and has been much apreciated both in the Congested Districts and other parts of Ireland, upwards of 3,000 copies having been circulated.

"In order to assist the bee-keepers in finding a market we purchased the honey offered to us during the six seasons ending March 31, 1902, our expenditure amounting to £2,570, and our receipts to £2,484. The sales were chiefly to business houses in England, where there was a very steady demand for both the clover and the heather varieties.

"The spring and summer of 1903 were wet, and it was a disastrous season for the bee-keepers. Very little honey was produced in Ireland, but, with the object of making the producers dependent on their own exertions, we had decided in the spring to offer a low price, so that the bee-keepers should do their best to find other purchasers and extend their market. Owing to the failure of the industry we bought no honey in that year.

"With the view of inducing the bee-keepers to rely more on their own resources we commenced in 1901 the organisation of local associations, which would provide hives and appliances as well as instruction, and also endeavour to sell the honey for their members. Up to March 31 last twenty-seven of these associations had been established. (See Appendix No. VII.)

"For some years past our staff had made great efforts to check the spread of foul brood, and 607 cases in all have been treated, usually with complete success, but, although we paid liberal compensation for the destruction of diseased stocks, it was found that in the absence of legal powers to compel owners to destroy affected stocks, it was impossible to make progress in the extermination of the disease."

A perusal of the above will enable bee-keepers on this side the Channel to see what has been done, and is being done, for the craft in Ireland by the Government of the day. It may also tend to explain the attitude of Mr. Wyndham with regard to further expenditure of the public funds in the endeavour to remove the troubles connected with bee-keeping.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

NOTES BY THE WAY.

[5668.] The work in the apiary should now be completed, each colony in good condition for the winter, enclosed in a

waterproof hive, with abundance of food, and plenty of late-hatched bees headed by young queens of not more than twelve or sixteen months old. Every stock should also have some kind of device to allow the bees a winter-passage over the tops of frames in order to reach the food as required. Most appliance-dealers now stock simple and effective little articles for this purpose. Some years ago we used tin-ferules pushed through the upper part of combs just under the top-bar of frame, and these answered very well. I have noticed a few of these ferules in some of my older combs when packing up for winter this season, and the holes still remain open, affording free passage to bees; but for several years past I have used strips of wood pared down at each end to a thin edge. Two or three of these strips placed across the top-bars of brood-chamber may save a colony of bees from starvation during a long spell of cold weather.

A correspondent asks my opinion as to the value of queens hatched late in September. I have had no practical experience of these. I get all my queens hatched out early in July—preferably late in May and during June—this being the period when Nature is at her best for their production—i.e., when the swarming impulse is being aroused in strong colonies, and we thereby get the continued high night temperature so requisite for the growth and development of the perfect bee. The swarming period usually lasts about six or seven weeks, and during that time, in my opinion, the year's supply of queens should be reared. In this way one has the opportunity of testing the laying powers of the queens, and also the style of work her progeny will turn out in the way of comb-building. Those of us who spend the whole summer among the bees, and are ever alert for what is best in bee-culture, will have noticed the wide difference in the growth of colonies under their care, and also the superior quality of work some stocks will turn out compared with others. Therefore, when we know how much the well-doing of the colony is dependent on the strain of bees and prolificness of the queen, our aim should ever be to produce the best we possibly can by careful selection, and by assisting Nature, not in producing out-of-season queens, whose life and welfare is so dependent on climatic influences. With regard, then, to late-hatched Italian queens, I know nothing; possibly the sunny skies of Italy may make a vast difference in the period during which the Italian queen-breeder may continue his work of rearing queens. I have not tried foreign races or strains of bees. The thousands of years Old England has probably been divided by the silver streak from the mainland of Europe have so acclimatised the native bees to our variable climate that I am quite content to write them down as *the very best bee* for Wessex. That, at least, is my opinion. I have also been asked if I can give reasons for comb-honey crystallising so early this season? I regret my inability to give a remedy to prevent it; but I can only conjecture the reason. And the only cure for solid sections is the melting-pot.—W. Woodley, Beedon, Newbury.

"BEE PEST" *v.* "FOUL BROOD."

A QUESTION OF TERMS.

[5669.] For a good many years I have been desirous that the misleading term in general use for the direst of bee diseases should be supplanted by one which should be both correct and unambiguous. To those acquainted with the facts of the case it is unnecessary to point out that "foul brood" is an expression dangerously inaccurate, while "bee pest" covers all the ground, and is also descriptive and simple. The malady is an indubitable *pest;* it is *pestilential* in its virulence, and *pestiferous* in its infective and contagious qualities.

Now that legislation on the matter is highly probable, we have in it both the occasion and the opportunity for the stamping of a correct nomenclature on the disease. I was, indeed, pleased to find in the draft of the proposed Bill a definite move had been made in the direction I am advocating. Now, all that is further required is that the Council of the British Bee-keepers' Association should put its *imprimatur* on "bee pest," and that the Editors of the British Bee Journal should uniformly adopt the term, and get their correspondents to do likewise. Then, if an Act of Parliament is passed, the expression will be used therein, and thus this not unimportant matter will be permanently settled.—W. H. Harris, Hayes End, Middlesex.

THE SEASON IN N.E. YORKSHIRE.

[5670.] The report on page 426 of last week's B.B.J. from Borobridge has tempted me to send result of the season's work in my small apiary, which is situated in a bleak position on the north-east border of Yorkshire.

I began the season with seven stocks, two of which were weak till late in spring, but a little assistance from the other hives in the way of brood soon brought them round, and by the end of June all were in the pink of condition. None of the supers given contained honey on July 1, although white clover was coming out nicely; but the

nights were cold about that time, which no doubt affected the ingathering. The clover harvest was finished and all surplus-chambers removed by the 22nd, so it will be seen that our season was a short one, but it was "merry" while it lasted.

From the seven hives I took forty-five finished sections and 145 lb. of extracted honey, an average of 27 lb. per hive, all first-class quality. I might add that only one of the hives swarmed, and I got from it two good swarms, which have since made capital stocks, but not an ounce of honey did that particular hive yield, although the hives were taken to the moors on August 6, but there was nothing stored in the supers there until the 25th, after which date the weather was simply perfect, until the heather-bloom was all over, say about September 5. Thus the gathering-time lasted less than a fortnight, but the bees made the most of the chance, with the following result:—Fifty finished sections, 94lb. of sealed comb in shallow-frames, and 52 lb. of pressed honey. Total: Heather honey, 196 lb., an average of 28 lb. per hive. The total result of the season is, therefore, 386 lb., or an average of 55 lb. per hive from supers only. Then there is the increase of stocks which I have got with the two swarms.

In addition to the above the bees gathered about 14 lb. of "honeydew"; it came in just at the close of the clover harvest. I was, therefore, able to isolate the "stuff" and extract the combs again before sending the bees to the moors. This meant a little extra work; but I considered myself fortunate in being able to prevent what would have been an unwholesome and uninviting blend.

In conclusion, I believe that empty built-out store-combs have contributed materially to my "take," which is now all sold except a little for home use, and the sample that I am sending for your valued opinion. — A. E. Young, Picton, near Yarm, October 29.

[Your section (smashed in post) contains very nice heather-honey. Sample of extracted is good clover-honey, but is rapidly granulating.—Eds.]

THE BEE SEASON IN DEVON.

[5671.] The honey-crop here, although not very bad, has not quite come up to expectations. I secured 1,600 lb. of surplus from thirty-two stocks, spring count, and have made no increase, but enter into winter quarters with thirty-one colonies, which are as many as I can keep at present. At date of writing many of the queens are still laying, and our bees are busy gathering pollen and honey from the ivy. The honey is inferior to that of last year, and very varied in colour. I am inclined to attribute this to the failure of clover-bloom, consequently this year bees were obliged to work on flowers of which they usually take no notice. For instance, I observed for several minutes the flowers of a small plum tree, from which four bees were continually gathering honey. I have also observed them repeatedly working on certain kinds of single dahlias.

Several neighbouring bee-keepers I have visited around here had fairly good results. Having been asked by the head schoolmaster of the town of Buckfastleigh to prepare his two hives for winter, I went and took from one (a swarm of this year) at least 30 lb. of honey. This gentleman and his assistant are enthusiastic beginners, and were not a little proud of their first year's "take." I would esteem it a favour to have your opinion as to the quality and source of the samples of honey enclosed. May I further trespass on your kindness to ask if sample of candy enclosed would do for queen and attendants in travelling cages? It is medicated with naphthol beta.

In conclusion, I express the wish that the Foul Brood Bill may succeed in passing, as bee-keeping seems to be expanding more and more every year; and if the efforts of the enlightened bee-keeper who tries to stamp out the disease are not supported by law, the day will probably come when the whole country will be so infected that we shall have to say good-bye to our hobby. As there are so many complaints that the pest has been spread by the introduction of alien queens, would it not be a good precaution—small though it may be—if dealers would give medicated food to queen and her attendants on the journey?—Br. Colomban, O.S.B., St. Mary's Abbey, Buckfast, October 26.

[Referring to samples of honey, No. 1 is very good on all points. No. 2 is also good in consistency, the blend of heather (E. cinerea), giving it an excellent flavour. Nos. 3 and 4 are about equal in quality, but not so good as No. 2. The candy is first-rate and very suitable for the intended purpose.—Eds.]

ANOTHER REPORT FROM YORKS.

[5672.] Having read Mr. Waddington's report of his bees' doings during the past honey-season, I beg to add my quota of "doings" with the bees in this part of Yorkshire. I must first say this is not a very good clover district, especially for apiaries near the town (Harrogate), which is from 500 ft. to 600 ft. above sea level.

I commenced the season with eighteen stocks, all of which were on the moors at

Goathland in 1903, and, curiously enough, the colonies that did best at the heather there were in the worst condition this spring, but the whole were in business-like condition by the time the clover should have been ready; but this year clover-bloom was conspicuous by its absence, although the stray was covered with it late in July; the bees, however, gathered very little honey from the abundant late bloom.

The swarming fever never really set in, half a dozen swarms being the total number that issued; two of these were sold, two I joined together, one was given to a friend, and the last gave itself up to our parish parson, locating itself in his garden. I work for both comb and extracted honey, my total yield from the early—or flower crop—being 150 well-filled sections and 1 cwt. of dark honey from mixed sources, not the least of which was one lot of honeydew, which is by some considered to be practically unsaleable, although the neighbours here continue to take it away at a cheap rate.

And now for the harvest from the heather. And here let me say emphatically that the best preparation of bees for success at the moors is *bees*—in other words—very strong stocks. Unfortunately, however, the weather at the commencement of the heather season was simply disastrous. My best stock pegged-out entirely owing to there being too many bees in the hive for the quantity of food in store and no provision for adverse weather, consequently the bees perished of hunger. The remainder, however, did very well when once fine weather set in on the 26th, and the bees thenceforward had a good time. I took thirteen first-grade sections, eighty-four second-grade,, and nine stone of extracted heather honey from the lot on their return home.

My stocks were never in better condition for going into winter quarters—in fact, there was too much honey in the frames of brood-chambers. I have, therefore, inserted in the centre of each hive one or two empty frames for the bees to cluster on, besides providing the usual passage-way across the tops of frames, and covering all up warm.

I hope more bee-keepers will favour us with reports in our JOURNAL. I send name, etc.—EXPERT, Sulphurland, Yorks.

BEE-NOTES FROM N. WALES.

[5673.] The bee-season in this part has been above the average, and the honey taken is of good quality, and not a pound of it contains honey-dew. On the other hand I know of several districts not far from here where the whole season's produce was nearly spoiled owing to this bee-keepers' trouble. I cannot safely say at present what my average is, as I have a quantity of heather-honey in the combs for pressing, but one stock of Cyprian hybrids has this year surpassed my former record, after twenty-three years of bee-keeping. From this colony I have taken 141 lb. of surplus honey—viz., 114 lb. of clover and 27 lb. of heather, and in addition I got from it three frames of food to help on another stock. It has also ample stores for winter, while the bees are now crammed on fifteen frames. The same stock has also this year built out nineteen standard frames of comb from starters only. I am therefore almost certain that it would have totalled 200 lb. of honey if I had happened to have built out frames of comb on hand. But, notwithstanding this successful work, I do not recommend the Cyprians or even a cross from them, for in ordinary hands they are quite unmanageable and might easily get one into serious trouble. A colony of these hybrids was the only stock of bees I ever had to master me and compel me to stop working with them till another day. They will become so furious in their onslaught as to sting the bark of trees, or anything and everything about them. I have seen them even curled up stinging bees from the same hive and rolling over the floor-board as if mad. I have had an Italian cross in my apiary for twenty-one years, and I find them splendid workers.

I quite agree with some of your correspondents that a good honey season is one of the best cures for foul brood. To my knowledge several stocks affected with the disease in May last are now quite free from foul brood, and I attribute this to the good honey season. I also notice this year on my driving tours in the country that the hives are more free from the disease than I have seen them for several years past.

Hiring Driven Bees. — While on the subject of driven bees I might add a line for the benefit of bee-keepers who, like myself, reach home late at night, by giving my own plan, as follows:—I carry them in skeps fastened with cheese-cloth, and before starting out, I arrange the hives for hiving the driven bees into, and place under each hive a body-box of the same size, but without frames. When I reach home and am ready to shake the bees out, the prepared hive is lifted off the empty body-box, then the cheese-cloth cover of skep is loosened and allowed to drop into the box, and the bees shaken on the top of it. This done, set the hive with frames on top and leave them for the night, and you can rest assured that

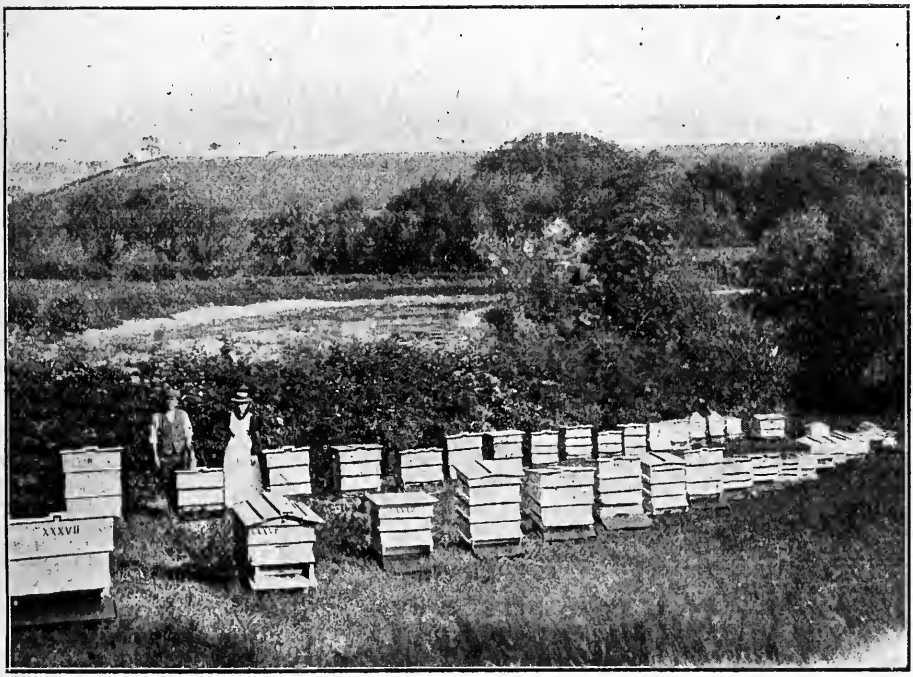
(*Continued on page* 436.)

HOMES OF THE HONEY-BEE.

THE APIARIES OF OUR READERS.

Mr. Hatliff is so well known by name as a successful exhibitor that we are glad to have a photo of his apiary, showing himself and one who is evidently a bee-man's helpmate in the person of his good wife. His notes need no addition from us:—

"If you ask me when I began bee-keeping I shall have to confess 'I don't know.' My father was an enthusiastic bee-keeper of the old skeppist school, and my earliest recollection is a long line of skeps down the garden-walk. There were sometimes



MR. W. HATLIFF'S APIARY, THORESWAY, CAISTOR, LINCS.

over a hundred of them, and I remember how we had to bang the pots and pans at swarming time!

"On one occasion, when three or four swarms joined together of themselves, he put the whole lot into a cask and let them use the bunghole for an entrance. As I grew older I had to help to hive swarms and drive bees, and I fancy the 'inoculation' I got in those early days has lasted till now, with just an occasional refresher.

"But it was only a few years ago that I began to use movable-comb hives for the first time, nor was my earliest experience with modern methods a very encouraging one, for, as I knew very little of comb-foundation, etc., I got a friend to 'fit me up.' The queen was a good one, and soon my hive was full of bees, but not a bit of honey did I get. At last I got a friend to come and look at the hive, and he discovered that the body-box of my hive had been fitted with drone-cell foundation! I killed thousands of fine drones and gave proper foundation, when all began to go on well, and, I am glad to say, my progress has not been stopped since.

"I still have a number of skeps, but they hang up in my outhouse, for I do not think them proper homes for bees at all, and still less 'proper' for the bee keeper.

"The figures seen in the picture are of myself and wife. In following my ordinary occupation I have to work from early morning till late at night (Sundays included), and so have to manage as best I can; but my good wife is a real bee-man's helpmate and worker in the craft—indeed, without her help I should have to give up either my work or my bees.

"I began early to make my appearance on the show-bench, and was very proud on winning the silver medal of the Lincolnshire Agricultural Society in 1902 and again in 1903 for sections and extracted honey respectively.

"I should like to say more, but these notes are already long, so I must conclude by wishing our Editors success in their efforts for the benefit of bee-keepers."

(*Correspondence continued from page* 434.)

all will be right. No loss of queens, and many half-suffocated bees on the cheese-cloth when shaking will have come round and be in the cluster by the morning. All you will have to do is to raise the top hive gently and put it on its floor-board, and you will not find a bee on the cloth. In shaking driven bees in the daytime I very often find them scattering over the place, entering nearly all hives, as they are strangers, and have not marked their new surroundings.—Jno. Berry, Llanrwst, October 26.

"A ROTTEN CASE ABIDES NO HANDLING."

[5674.] It seemeth to me that this quotation from the writings of my great progenitor fully describes the strange and inexplicable conduct of such as do at present raise their voices against the proposed scheme for the extirpation of that vile bee-pest—foul brood. Every practiser of that pleasant pastime, apiculture, must readily acknowledge there is "Something rotten in the State of Denmark," and all afflicted with this rottenness would be ready to exclaim, "Out, d——d spot! out, I say!" for, too frequently, the appearance of the scourge calleth forth "Curses not loud, but deep." After our most earnest labours have been expended on our hobby, and our purse-strings well drawn, there cometh this "frost, this chilling frost, that checks our buds from blowing." "Sickness is catching," if a trite, is a true saying. Yet many apiarians would leave "Nature and Sickness to debate it at their leisure," forgetful that "A little fire is quickly trodden out, which, being suffered, rivers cannot quench." These procrastinators should remember that "'Tis better playing with a lion's whelp than with an old one dying," and take the insidious depredator betimes, lest his growth should make him unmanageable. Taken in the bud, it seemeth to me, we might unitedly succeed, and "Out of this nettle-danger, pluck the flower, safety"; for, at present, the individual too frequently finds that, after all his anxious labour, he has "Scotch'd the snake, not kill'd it."

Now, the vast majority hold strongly that compulsion is a "Consummation devoutly to be wished for," while the small minority, to the question, "Canst thou not minister to a *hive* diseased?" answer, "The patient must minister to himself." Will says, truly, "They jest at scars that never felt a wound." So in addition to "The thousand natural shocks that bee-life is heir to," the bees have to go on suffering from this added ill. At present, therefore, those burdened with this trouble, and carrying on apiculture in spite of its ravages, are "like the bee tolling from every flower the virtuous sweets, but like the bees, are murdered for their pains, *i.e.*, their labours and expense go unrewarded. Yet these pusillanimous do-nothings, although they see on every side that "Diseased nature breaks forth in strange eruptions" of this fell scourge, prefer to hug it to their bosoms, and in acts, if not in words, cry, "Throw physic to the dogs."

At the late Conference, all the arguments used against compulsion seem, to a plain, blunt man like myself, puerile, and it appeareth to me that even the speakers themselves felt their weakness, and after they were done exclaimed *sotto voce*: "Tut, tut, they're good enough to toss, they'll fill a speech as well as a better!". That is where they attempt to adduce arguments, for the conduct of several seemed to be thus—"Give you a reason on compulsion! Nay, altho' my reasons are as plentiful as blackberries, I will give no man a reason on compulsion, I." Bee-brethren, "Pitch, as ancient writers do report, doth defile." Avaunt! it may be your turn next!

Thus have I, as on countless former occasions, consulted the immortal Will, whose works supply a text, pat for every emergency, and, as these few quotations have consoled my mind and soothed my ruffled feelings, I give them to your readers, at the same time expressing the hope that these few dissentient voices may be "like that of the cuckoo in June, heard but not regarded."—Will Shakespeare.

REVIEWS OF FOREIGN JOURNALS.

By "Nemo."

Death of Michael Ambrozic.—The death of this widely-known veteran bee-keeper and queen-breeder at Moistrana, Carniola, is recorded in the German bee journals. As a dealer in Carniolan bees, Ambrosic occupied the most prominent position, and had business relations not only with bee-keepers in all parts of Europe, but also in America. In the last seventeen years no less than 34,000 colonies of Carniolan bees have been despatched from his establishment all over the Continent, but mostly to Germany, where the strict business methods of Ambrozic found many admirers. He was a regular and welcome attendant at the congresses of the German-Austro-Hungarian Bee-keepers' Society.

Injurious Honey-dew.—A curious instance of loss of bees was described in *Bienenwirthschaftliches Zentralblatt* as reported by A. Cornelius at the meeting of Oldenburg bee-keepers. He said that at the village of Harnstrup at the end of June and beginning of July warm days were followed by frosty nights. The re-

sult was that all the oak trees were covered with honey-dew, which was eagerly collected by the bees, and as a consequence they appeared to have been poisoned, as the mortality was so great that the colonies became very much weakened. Then bees lost the power to fly and crawled about only to die in from four to six hours. He concludes that it was the honey-dew from the oak trees that poisoned the bees, because he found a large ants' nest also poisoned, whereas ants in other nests further away from the trees had not been affected.

The *Leipziger Bienenzeitung* recommends that swarms should not have combs or foundation given to them, but be encouraged to build combs. If the swarm supplied with built-out combs does store more honey at the beginning than the one that has to construct comb, it is found in the end that the latter will have as much honey stored as the former. This is easily explained, for the swarm that has to build combs develops greater activity, which should be encouraged and not suppressed. It is to the interest of the bee-keeper to allow his swarms to construct as many combs as possible, as they save the cost of foundation. Drawn-out combs and comb foundation should only be resorted to when the flow of nectar is very abundant, and when the bees begin to build drone comb. Comb foundation impressed with the bases of worker-cells would prevent this.

Bees and Grapes.—We read in *L'Abeille de l'Aisne* that a bee-keeper at Lagny, who had been fined by the magistrate as a result of the complaint of a neighbour who complained of bees damaging the grapes in his garden, has had the magistrate's decision reversed on appeal to the Civil Court at Meaux, who also condemned the plaintiff to pay all the costs of both the first suit and the appeal. These are the points of the summing up:—"Whereas, first, it is demonstrated scientifically that—differing from wasps and hornets—the mandibles of bees are not constructed to enable them to perforate grapes; that they are not able to gather the juice except in those berries that are already perforated by birds and insects, or split by the temperature. And, whereas the bees could not have caused the appreciable damage; that, in fact, on the evidence of the plaintiff, his are early table grapes, and not those intended for fermentation; that in any case it is admitted that grapes are not melliferous—that is to say, that bees are not eager to collect from them, there is no proof that the damage done to the complainant's grapes had been, or could have been, caused by the bees, but, on the contrary, might have been done by birds and insects, etc."

Queen Rearing.—Pastor Sträuli describes the latest methods of queen rearing on the Swarthmore plan in the *Allgemeine Zeitung für Bienenzucht*, illustrating the article with woodcuts lent for the purpose by the BRITISH BEE JOURNAL.

Wax Scales.—The exudation of wax and the formation of the scales had been known for a long time. Formerly it was supposed that bees collected and brought home wax that they found ready-made by Nature. The editor of the *Münchener Bienenzeitung* points out that in 1691 Martin John was the first to observe the exudation of wax from the abdomen of the bee. In 1745 Hermann Hornbostel of Hanover mentions the matter in "Hamburger Bibliothek." In 1768 a German bee-keeper makes the same discovery, so does Duchet in Freiburg in 1771, and Wildman in England in 1779. It was, however, the blind Huber who first explained the phenomenon scientifically, and showed that wax was produced from honey. We would also add that Thorley mentions his discovery of wax scales in 1744, and Martin John, we believe, made the discovery in 1684.

We are informed by the *Allgemeine Zeitung für Bienenzucht* that the German Central Bee-keepers' Association has twenty-two provincial associations affiliated to it, numbering altogether 34,747 members. A meeting of the delegates was held in Berlin on October 4. The next congress will be held next year in Danzig, when the Association will celebrate its twenty-five years of existence, it having been founded in 1880.

Wasp's Sting Poison.—M. A. Wathelet says in *Le Rucher Belge* that the poison from a bee's sting must be different from that of a wasp. Some days ago he took hold of a small wasp that was trying to get into one of his hives, which stung his finger. The pain was very acute. He rubbed the wound to get out the poison, but the pain was not eased. An hour afterwards the finger was very much swollen and very painful, and for three days he was not able to bend it. He says he has had thousands of stings from bees since he has cultivated them, but has never felt such pain. He would prefer fifty stings from bees than a single one from a wasp. Ten minutes after being stung by a bee he does not even feel it, but feels the effect of a wasp's sting for eight days afterwards.

Bee-keeping in Siberia.—There is an interesting account in *Praktischer Wegwisser für Bienenzucht* on bee-keeping in Siberia. The winter begins in September and lasts until May, when summer sets in, there being no spring or autumn. In winter the snow is often ten feet deep, so that hives are sheltered from the cold. Lime trees are the principal source of honey,

and there are seventeen different kinds, which blossom at different periods. Most of the bee-keepers make a living out of the industry, and use movable-frame hives which are separated from each other, so that they can be manipulated from any side. Like ours, the hives have covers and stands, which usually consist of four posts driven into the ground for the floor-board to rest upon. Only strong colonies of about 15 lb. weight are kept, swarms and casts being generally united, frequently as many as five or seven going to make up one colony, after having taken away the queens and drones. Decoy hives are suspended in the trees to catch vagrant swarms. Owing to the intense heat during the day bees do not go out from about eleven o'clock until it gets cooler in the afternoon. It is said that there are apiaries of over one thousand hives, and that a good hive will yield 100 lb. of honey, which sells for about 6d. a pound.

Victorian Bee Statistics. — We find in *The Australian Bee Bulletin* that the returns for the season 1903-4 have just been issued by the Victorian Government statist. They show an increase in the number of bee-keepers of 1,207, of frame-hives 4,278, box-hives 4,355, but a decrease in the yield of honey from frame-hives of 310,894 lb., from box-hives of 54,469 lb., and of beeswax from frame and box hives of 4,028 lb. The average yield per frame-hive for the whole State is a little over 30 lb., and per box-hive slightly over 11 lb., as compared with an average yield per frame-hive of 50 lb., and per box-hive of 17 lb., for the season 1902-3, or a decrease of average of 29 lb. and 6 lb. respectively. The following are the returns for the last two years :—

Season.	Bee-keepers.	Bee-hives.	Honey. lb.	Bees-wax. lb.
1902-3	4,402	32,126	1,199,331	23,061
1903-4	5,609	40,759	833,968	18,979

ERRATUM.—In last week's "Reviews," page 427, by a printer's error, Professor Cook's name is spelled Cork.

Queries and Replies.

[3605.] *Dealing with Foul Brood.*—I am sorry to say that foul brood broke out among my bees in the spring of this year. I had twenty-one stocks at the time, and thought they were all perfectly healthy till the expert called and noticed two hives that were not supered, and on examination it was found they were affected with the disease. I had not pulled the hives about early in the season any more than I was compelled, and they seemed to be breeding all right. I have kept bees for the last twenty-five years, and never had the slightest sign of disease before. After finding out the trouble I thoroughly overhauled every stock without delay, and found nineteen of the twenty-one more or less affected. I then burned seven of the stocks outright, and thoroughly disinfected the hives. This done my intention was to shake the bees off all combs of the others and treat them as driven bees this autumn; but I now ask: What is the use of doing this when, as I believe, the disease is located not above 150 yards from my apiary? I know there were eleven skeps in the place two or three years ago, but this spring there were left alive only one strong stock and two very weak ones. All the other skeps in which the bees had died of the disease were left about in the garden. I asked the owner how the bees were doing, and was told there were only three stocks left, as someone's bees robbed theirs clean out last autumn; so you can guess where mine got foul brood from. I offered 2s. 6d. for the empty hives and rubbish to burn, but this was refused. Since then a stray swarm has taken possession of one of the skeps. I offered £1 for the bees that were still left alive, but this offer was also refused. I therefore ask: What can I do? It seems useless for me to start burning mine and renew my stocks, seeing that they would be as bad as ever next season. I am only a labouring man, and the extra expense of renewing after loss of the seven stocks already burned is a serious matter, and therefore comes rather heavy, so I fed up with medicated syrup, and am going to use naphthol beta when making candy for winter, and will hope for better luck next spring. I send name, etc., and sign—HOPEFUL, Essex, October 28.

REPLY.—It is now too late for remedial measures. Your only course short of destruction, therefore, is to keep a close watch on the hatching brood in early spring, and adopt such measures as may be desirable at that time.

[3606.] *Starting Bee-keeping.*—As a new reader of the B.B.J. I should feel much obliged for a word of advice in the B.B.J. on the following. Last August I made a frame-hive and bought a lot of driven bees, which latter were housed on eight frames fitted with half-sheets of comb-foundation. The bees now seem to be doing well. I have since made five more hives, and wish to get them stocked with bees next spring. My question therefore is—How and when should I get the bees?

My idea being to get some surplus honey next year if possible. 1. Should I purchase swarms, or is it better to buy stocks on frames? 2. What would be about the cost of a swarm or stock? I am only a beginner at bee-keeping, this being my first attempt. Do you think six hives too many for me to start with? I have your "Guide Book," also "Simmins' "Modern Bee Farm." Of course these books will help me to manage bees when I have read them up this winter. I send name, etc., and sign—NOVICE RATFORD, Staffs, October 31.

REPLY.—1. This is simply a matter of choice, though stocks on frames, if purchased early, will be more likely to yield surplus honey next year than swarms. 2. As regards prices, they vary so much that you had better consult our advertising pages in the season. On the other hand it is sometimes better to buy from a reliable dealer who may charge a little more, but is in some degree responsible for what he sells. 3. As you have five empty hives you might stock two of them with bees on frames, and buy a strong natural swarm at the end of May for one other keeping two hives on hand for emergencies. This would be as many as are safe for a beginner to manage in his first season of bee-management.

COMB OR EXTRACTED HONEY—WHICH?—II.

By C. P. DADANT.

(*Continued from page* 217.)

In the previous article, I stated that in a large apiary swarms were not wanted. We had another reason for not wanting swarms. Ever since 1872, or for over thirty years, we have had out-apiaries. It is not always possible to hire help to take care of out-apiaries, neither does it always pay to hire some one on purpose to catch swarms. On the other hand, the farmer on whose land the out-apiary is located often has no time to attend to the swarms, for they come at a season of the year when every able-bodied person has his or her hands full. There is the corn to plough, the wheat to harvest and the hayfield to care for. So, many swarms are lost. It was thus a matter of great importance to us to have a method of management by which swarming could be, if not entirely avoided, at least decreased very materially. Thus we had strong leaning towards the method which would bring about the desired result. These conditions still remain.

Another reason with us for preferring extracted honey is the great ease with which it may be handled. Thirty years ago our roads were much worse than they are at present, though we cannot make a very great boast as yet of their condition. But apiaries along the Mississippi are often placed in locations that are difficult of access, among steep hillsides where roads are of the worst description that one can imagine. For years we had an apiary located at the top of a hill half way between Hamilton and Warsaw, and the road between the two cities was nothing but rocks or mire. Comb honey needs very careful handling, and the jostling over rough roads easily damages it, while extracted honey, in barrels or in cans, may be hauled up and down the roughest hills without danger of damage to anything but the vehicle, if the load be too heavy. Shipping of either kind also shows the same advantages for extracted honey. The apairists who are on a main line of railroad, so that there are no changes of cars between the loading at the station and the unloading in the large city, take the minimum risk; but we had the bad luck of being on a way station, and could not reach the big city without at least one change of cars, unless the honey had been shipped in carlots. So we always had more or less breakage and leakage when shipping comb honey away. This gave chances for disagreements with consignees or commission men. The only way in which we had well succeeded in transporting our honey safely was by Mississippi river boats to St. Louis. But the St. Louis market, I am sorry to say, has proven one of the cheapest markets in the world. I can hardly say why, unless it is because much inferior honey from the South has found its way there and spoiled the market.

With extracted honey, on the contrary, we have never had any loss, outside of the occasional stealing of a canful by some unscrupulous railroad hand. Well-selected barrels or well-nailed tin-can cases have proven safe packages for the transportation of our honey even from here to Paris, France. To ship small cans or pails with lid, we make boxes that cannot be turned over, with a handle across the top just as for a basket. Yet comb honey is now packed so that it will stand a great deal of rough usage, and the objections which I indicate do not have as much weight to-day as they had years ago.

Keeping the honey over from one year to another is another point which argues strongly in favour of the honey without the comb. I have never seen honey in the comb a year old or more that could be sold at as good a price as new honey. The changes of temperature are not good for it, and I think there are very few bee-keepers who keep comb honey in any quantity from one year to another. If

it is kept in a warm dry place it will do best, but somehow it will show its age and will be less saleable.

Extracted honey may be kept for any length of time, if it is kept in the dark and in tight vessels, provided it was sufficiently ripe when put up. This is of great value. In good seasons we are not the only ones who have a large crop. The season is ant to have been successful for many others also, in our section. The price of honey is therefore likely to be less, and it has never been my policy to sell my crop at once at the best price I could get, unless that price was sufficient in my estimation. I want for my honey as fair a price as it is possible to get, and it is often necessary to keep it, a part of the crop at least, for a year or more.

During the eighties we had a number of good crops in succession, and our honey was of the very best quality. I remember that at that time it was about four years before we reached the bottom of our pile of barrels full of honey. We were thus able to get our price during a season of scarcity. I believe that all producers of comb honey will agree with me that it would have been bad policy to keep comb honey so long. But the extracted honey, well ripened, and in a dry store-room, would keep as good as fresh. A gain of one-third in value between the price of the crop in a season of plenty, and the price of this same crop in a season of scarcity, is well worth considering, especially if we think of the fact that you keep your trade if you can supply the customers when no one else can.

Perhaps the readers will think that I am too partial to the production of extracted honey; that a number of my objections will not apply in their case. I am not trying to win them over to my side, I am just stating things as they have appeared to me, as they appear to me yet. I am not interested in the following of the production of extracted honey by any one but our own selves. I mean to show both sides of the question as I see them, and let the reader make his choice, if he has not already done so.

I have still more arguments and facts to present in a further article.

American Bee Journal.

PRESS CUTTINGS.

KILLED BY STING OF A WASP.

A coachman named Fisher, who worked for Mr. Compton Rickett, M.P. for Scarborough, recently died at his employer's country seat at East Hoathly, near Lewes, as the result of a wasp sting. He swallowed the insect with some beer, and his throat was so badly stung that he was suffocated.—*Daily Chronicle.*

CURE FOR WASP STINGS.

(To the Editor of the *Standard.*)

SIR,—Having heard of two deaths from wasp stings in the throat during the last few days, I shall be glad if you will publish in the *Standard* a fact which I read in your columns about twenty years ago, and have several times since proved to be true—i.e., that the juice of pulp of an onion instantly removes the poison of both wasp and bee stings. The gentleman who wrote to your paper twenty years ago had taken a wasp into his mouth while drinking a glass of beer, just as one of the victims did this week; and by chewing onion at once, and keeping the pulp at the back of the mouth and swallowing slowly, no swelling whatever resulted, and his life was saved.

Only a few weeks ago I was stung by a bee on the temple, just where the nerves centre. I went to the onion bed, cut one asunder, and rubbed in the juice; then, to make doubly certain, scraped a little onion and put it on the spot as a poultice for an hour, and the result was no swelling at all, or pain after the first few minutes. No one to whom I have mentioned this remedy has ever heard of it—not even an old "swarm-taker" in the country, to whom I ministered, knew the full value and virtue of the onion.—I am, Sir, your obedient servant, J. GREEN.

Notices to Correspondents & Inquirers

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

BEGINNER (Cambs.). — Granulated Honey in Combs.—There are no means of reliquefying honey that has granulated in combs other than by melting the latter along with the honey and removing the cake of wax from the surface. If carefully done, by placing the combs—after slicing them up—in an earthenware vessel and immersing the latter in a second vessel containing hot water, then heating until the contents are thoroughly melted without burning.

*** *Some Queries and Replies, not being urgent, are held over till next week.*]

Editorial, Notices, &c.

(To the Editors, *British Bee Journal.*)

"THE IRISH BEE GUIDE."

AMENDE HONORABLE.

DEAR SIRS,—I desire to express my regret that in the preface to my book, "The Irish Bee Guide," I did not, as I should have done, express my acknowledgment to Mr. T. W. Cowan for the information and teaching contained in his standard works, *The Honey Bee* and *The British Bee-keepers' Guide Book*, to which I owe, in a large measure, what I know of bees and bee-keeping. I also desire to express my regret that I have (under a misconception of my right to reproduce them) used certain illustrations from these copyright works without first obtaining his permission. I need hardly say that I deeply regret having infringed Mr. Cowan's rights, and that he may rely upon it that, now I am better informed as to the law of the matter, I shall take every care that no further infringement occurs, and I acknowledge the generosity of Mr. Cowan's behaviour in overlooking my error.

Yours truly,

J. G. DIGGES.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "THE EDITORS of the 'British Bee Journal,' 10, *Buckingham-street, Strand, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 10, *Buckingham-street, Strand, London, W.C.*"

AMONG THE BEES.

"A WELL-APPOINTED COMMONWEALTH."

PART I.

"Creatures that by a law in Nature teach
The art of order to a peopled Kingdom.

[5675.] I look on this model community in a spirit of wonder and awe. Everything is so perfect. Laws are so beneficent, yet so inexorable; so kind, yet so ruthless. Every citizen is on a perfect equality with every other, and each works for the good of the commonwealth as a whole; but the unit, as such, has no rights. All the claims it could assert are made subservient to the greatest good of the greatest number, which means the whole community; and each single unit drops out of the race as quietly and as little missed as when, in a wind-swept wood, the leaves drop in their thousands to be trodden under foot. But, I remember, each leaf has performed its individual duty, and so has each bee. Duty done, death follows; and so it has gone on, and will go on eternally. But the race abides; the community endures, nay, multiplies and increases. Let us dwell shortly on several features of this commonwealth, which form an entrancing study for all true lovers of *Apis mellifica*.

Their Laws.—We, in our short-sighted way, lay down certain rules and say that the bees should conform to them, forgetful that they are guided by laws beyond our ken. Therefore, how often do we discover that our fondest anticipations are falsified, and that some wiser guide than we could prove so directs those wise and far-seeing creatures that they act contrary to our anticipations, but yet in such a way that good follows and not evil. It is only one more proof that our wisdom is not infinite, but that more exists in their rule and government than is known to us, or than quite fits into our ideas of ethics. We try to account for these chances and changes by rules applicable to and guiding human beings, forgetful the while that such laws cannot apply in a state where the very elements of existence are so different. How often, then, do we find that to succeed we must conform with their laws, and not they with ours.

Their Government.—Nature displays no fairer picture or more perfect plan than the government of this commonwealth of bees, with its mystic but well-regulated laws, working to one common end, and resulting in perfect felicity. It—the unit—is but the type or symbol of something great and mighty, for the common care and comfort is as dear to each bee as it is to the teeming thousands which constitute the vast community. And that one spot in all the world where all their fondest affections are centred, and around which every thought and interest of their being is concentrated, is ideal in its internal arrangements. Unity in thought and intent, as well as in every act and deed, is the secret of their strength. No individual can stand alone, and no single bee isolated can exist, for all are but links in a great continuous chain. The links may change, but the chain endures. Each unit of the community has entered into a state which

is an inheritance from its ancestors, and the colony exists from the labours of these ancestors, who went on toiling and accumulating, knowing that others would enter into their heritage.

Their Inheritance.—Without this spirit, handed down from generation to generation, the whole fabric would cease to be. The existing bees are the children of Hope, because their forerunners toiled. Those ancestors, remote or recent, laboured, and these now existing have entered into the fruits of their labours. We here see the totality of life in the light of a vast unity, and it presents itself to our vision as a majestic oneness through every part of which runs the mystic bond of kinship, and a heritage of wise laws; an admirable government, a perfect division of labour, a wonderful combination of effort, a far-seeing hoarding up of accumulated stores, a prescient provision for renewing the line of succession, all of which have not only to be kept up unimpaired by the present denizens of the hive, but handed down intact to future generations. It is written that no man liveth unto himself alone, and most certainly no bee liveth unto, or for, itself, but for all other bees now in, or to be in, the hive of which it is a unit.

Their Discipline.—Each bee is born, not into a chaotic crowd, but into an organised industrial army, of which, even from the very first, it forms an integral part, a producing unit, necessary for the success of the whole. The greatest happiness of the greatest number is the very foundation on which the whole superstructure of this unique government is based and built up. Each insect, in its own proper person, is as necessary to the progress and well-being of the community as any other of the many thousands, and as its welfare is bound up in that of the state, it is well that it, and the others, should plan and labour for that which is for the good of the individual, as well as of the organic whole. Every single citizen has a share in shaping the nation's destiny and polity; but it, again, is subject to the inexorable law which makes it but a part of the social whole, so that each is satisfied with the result which works for the good of the colony, and, as a consequence, we have this organised army of toilers subjecting themselves to self-imposed discipline of the most rigid sort.

Their Work.—Labour is an inherited instinct with them, for their ancestors toiled from the first of time, and this indefatigable and persistent spirit of industry has been handed down from generation to generation, so that their descendants have acquired it as an inborn heritage. No single bee can rest in a state of idleness, which is a trait altogether alien to its character. Labour, incessant and prolonged, is its greatest blessing, for it knows that by its industry alone can the colony go on existing. "Time is fleeting," even for a bee, and it acts as if it knew that its short span of life must soon draw to a close, and that duty calls on it in loud and clarion tones to labour while it can, for soon the sands of its hour-glass will run down. I doubt not it knows it will not reap where it has sown, but the spirit of heredity again shows it that others will enter on the heritage it may leave behind, as it itself came into possession of the labours of past generations existing before its time.—D. M. M., Banff.

(To be continued.)

BEE-JOTTINGS FOR NOVEMBER.

[5676.] *Retrospective.*—It is interesting sometimes to compare results which have "materialised" with results which had been anticipated at an earlier period. In this way one's judgment can be tested, and additional knowledge acquired for future guidance. Mine is but a small apiary; my experience therefore rests upon a limited basis, but I think I am right in concluding that hives which need no spring feeding will, other things being equal, be those which will give best results in the honey harvest. My note-book, carefully kept, enables me to arrive at this conclusion. Further, I gather that it does not matter whether such food be honey, or good sugar syrup, so long as there is plenty of it available. I have never done any re-queening of stocks—that I leave to the bees themselves — but I find that my stocks rarely swarm with a queen of less than two years old. This year the only two swarms I had were headed by 1901 queens, and these swarms were so large that it is quite clear to me that to supersede queens every two years is to waste excellent material in many instances.

My first swarm came off on May 25. I placed the new hive on the old stand, leaving the parent stock close by for three days and then removing it to a distance so that the swarm might get all flying bees. This swarm yielded 64 lb. of surplus, and the old stock 44 lb., the honey from both being of first-class quality. Swarm No. 2 came off on June 25, five weeks after the first super was given, which shows that room in advance of requirements will not always prevent swarming. In the case of this swarm, I gave them two frames of brood from the parent stock, and the position occupied by the latter, removing the old hive to a new location at once. I also gave to the swarm the super from the old stock. Upon lifting the quilts at 9 p.m. on the night of hiving, I found the super packed with bees into every corner. Two days later I gave them a second super which they also filled. From this swarm

I got 82 lb. of splendid honey, besides leaving a brood-nest thoroughly well stocked with natural food. The policy of removing the old stock to a new site and giving the swarm the old position seems amply justified. I get no "casts" from such stocks.

Honey Jars.—What a splendid opening there is for the man who will really supply a 16 oz. honey jar! I sent an order last spring for a large quantity of jars to an advertiser whose advertisement stated that his jars held exactly 1 lb. Imagine my annoyance when I found that 18 oz. was nearer their capacity than 16 oz. I cannot afford to give more than 16 oz. to the pound, and hence had to weigh each one separately. Here was double work, and an unsatisfactory appearance about the finished article through the honey not reaching the cap. It surely is as easy a matter to make a jar of the proper size as to make it one-eighth too large. A screw-cap that really fits comfortably is also a great desideratum.

Prospective.—I have followed with great interest the discussion on foul brood legislation, and think that a Bill dealing with the question is now within the region of practical politics. It is to be hoped that, if introduced, it will be energetically carried through and placed upon the Statute Book during next Session. When the time comes every bee-keeper should write to the M.P. who represents the constituency in which he lives, asking him to support the Bill. County Councillors also will need to be approached and interested in the matter, if the measure is to become operative when secured. I trust the Bill, when it comes, may, in operation, disarm the opposition of its adversaries, and fulfil the expectations of its friends.—W. H., Brilley, Whitney-on-Wye.

FOUL BROOD IN CHESHIRE.

[5677.] I find from a letter in B.B.J. of October 27 (page 426) that I am credited with having described the state of foul brood in Cheshire as being "in such a form as few counties can have ever seen." I now write to say that was certainly not the meaning I intended to convey. My remarks were intended to apply to some parts of Cheshire, and not indiscriminately to the whole county, which, speaking generally, will probably compare favourably with other counties. It may be of interest if I give you an abstract from a district report, compiled from the returns of an expert's tour in a piece of country about 12 miles long and four wide, and to those lucky bee-keepers not troubled with the pest it may serve to impart some information as to what the troubles of bee-keeping in such a district are really like. I may say the report embraces the results of visits paid to thirty-five bee-keepers—members and non-members—located within the area referred to.

1. Ten stocks; four badly infected (to be destroyed), others healthy.
2. Two stocks; both in fair order.
3. Eight stocks; five rotten with disease (to be destroyed), others healthy.
4. Eight stocks; all healthy.
5. Three stocks; healthy, but nearly dead from lack of food.
6. Four stocks; one slightly infected, the others good.
7. Twenty stocks; healthy as far as could see.
8. Two stocks; did not wish to have them examined.
9. Nine stocks; all healthy; two stocks just dead from starvation.
10. Four stocks; all healthy.
11. Five stocks; one stock slightly infected, burnt two combs.
12. Twelve stocks; too cold to be examined; healthy last year.
13. Four stocks; all healthy.
14. One stock; healthy, but very weak.
15. Two stocks; one infected; two frames destroyed.
16. Three stocks; all healthy and well-kept.
17. Two stocks; one slightly infected, burnt comb; others well cared for.
18. One stock; healthy.
19. Three stocks; three slightly infected: burnt combs.
20. Three stocks; one infected, burnt three combs.
21. Two stocks; one rotten with disease, burnt everything; other stock in splendid condition.
22. Two stocks; one slightly infected, cut out diseased cells; other stock good.
23. One stock; healthy and strong.
24. Five stocks; one slightly infected; others healthy.
25. One stock; healthy.
26. Seven stocks; all healthy and strong.
27. Two stocks; one rotten with disease (to be destroyed); other stock healthy.
28. Fourteen stocks; ten absolutely rotten with disease (all to be destroyed); other four stocks healthy.

Of the remaining seven, not enumerated in list, six were non-members, who declined to have their hives examined, and refused the expert's offer of help. The other one also declined expert's help; had disease in his hives last year.

The above list includes apiaries kept by people in all conditions of life, and to me it would be interesting to know how those who oppose any form of compulsion would propose to satisfactorily deal with such a district and protect the innocent from the wilful neglect of their neighbours. I ad-

mit that my efforts have failed.—E. PERCY HINDE, Liverpool, November 1.

PRICE OF HONEY.

[5678.] Referring to the letter of Mr. Farmer (5644, page 387), *re* price of honey, I do not see how he can expect the advertisement columns of the B.B.J. to be closed against all honey for sale except that fit for table use. I have bought English honey at from 3d. to 7d. per lb. from one apiarist through its pages, and each lot has fulfilled the purpose for which it was required. On the other hand, what may be justly complained of is that foreign honey can be sold as English. The only remedy at present against this is to obtain a written guarantee from the vendor that it is English.

Can our Editors help in this matter by placing all English honey under a separate headline, guaranteed as such by the vendors? There is no reason for excluding foreign honey, but I think we have a right to hope that none but honest advertisements should appear in our journal. At present an English apiarist can sell foreign honey through the B.B.J. under the guise of English.

There is no law against a man putting in a catch advertisement, offering honey in bulk at a low price "to clear," and in this way he may dispose of a ton of foreign honey. If Mr. Farmer would like to see specimens of the sample sent by advertiser of some honey sold to me at 45s. per cwt., together with sample taken from bulk when received, I will forward same, and I think he will conclude that I, at least, "won't bite" twice.—J. GRAY, The White Apiary, Long Eaton.

[The right to ask for a guarantee that honey, bought as English, is what it is sold for lies with the purchaser, and should in all cases be obtained. It would lead to much trouble and confusion, if not worse, for us to have separate headlines as suggested.—EDS.]

FOUL BROOD LEGISLATION.

[5679.] Referring to the paragraph in *Daily Telegraph* of October 28, and the editorial mention of it on page 431 of B.B.J. last week, I write to say that, like the President of the Board of Agriculture, "I know nothing about this." A similar paragraph appeared in the *Daily Express*, and a Press-cutting agency sent me a copy of it. How such a statement came to be made I do not know, except as a result of the methods which newspaper editors and reporters have of mixing up things about which they have a limited knowledge. I believe, however, the promise of help in passing the Bill has been made to others, conditionally on its need being demonstrated by requests from County Councils. Honour to whom honour is due, is an old saying, and I think with regard to the proposed Bill that Mr. George M. Saunders has deserved much praise from his untiring efforts in this direction.—(Rev.) H. NEWMAN, The Parsonage, Buntingford, Herts.

[We are very pleased to have the above disclaimer, which goes to prove the need for reliable verification of the reports appearing in the columns of the daily Press. The paragraph in question appeared not only in the papers mentioned above, but in the *Daily Mail* and a dozen or more papers in various parts of the country. Too much reliance has, we think, been placed on half-defined statements, and it is satisfactory to know that the B.B.K.A. has now received an authoritative mandate from the County Associations to deal with the question of endeavouring to obtain legislation in the interests of bee-keeping. The committee will, we are sure, do their best, and we are equally sure that their proceedings will be conducted on proper business lines.—EDS.]

BEE-NOTES FROM NORTH WALES.

FROM A LADY BEE-KEEPER.

[5680.] I only began to keep bees in 1902, some friends helping me; now, however, I have to work single-handed, everyone about the place being afraid of the bees. I get most fearfully stung at times, but do not mind. The bell-heather here is mixed with ling as well as gorse. A lady visiting near here has brought some honey from Wiltshire, which she calls "true gorse honey," and she seems to think it ranks very high in quality as regards flavour, but I have not seen it mentioned in your paper, nor do I hear it spoken of in the same way as heather or white clover, and should like to know your opinion of it. I take your valuable paper in every week, and was much interested in the illustration of an apiary near Bodfari, in your "Homes of the Honey Bee," on page 415, it being only about three miles from here. I only have two colonies of bees, both in frame-hives, and have tried to prevent the issue of swarms, because I might not be able to manage more hives alone. I secured a hundred one-pound sections from the hives; but was unfortunately from home in June, and during that time lost the queen in one hive. Only for that mishap I think my bees would have done very well this year. Would you kindly tell me if the enclosed sample of honey is considered good? Is the flavour heather or gorse, or both mixed, and, if not, could you say what it is? The sample was taken in July last. We have heather

and gorse in large quantities on top of a very steep hill just above my hives. The bees would first have to fly very high, and then quite half a mile to reach the forage ground. They have not been much among the clover and other flowers this year, as everything has been dried up. My flower-garden has a good deal of rock under it, and this makes me wonder what the flavour of my honey is; so if you can tell me I will be very glad. In concluding, I add a line to say Mr. Cowan's "Guide Book" is very helpful. I send name, etc., and sign—KITTA, Tremierchion, St. Asaph.

[The strong heather flavour of honey sent predominates, and makes it impossible to say from what other source it has been gathered. It is a very nice honey for table use.—EDS.]

SELLING DRIVEN BEES.

[5681.] I was surprised to read about Mr. W. H. Brown's troubles connected with "selling driven bees," as described on page 408 of B.J., as I could have supplied him with fifty lots during the month of September. I wrote to one advertiser in B.B.J. but got no reply; and to another I sent a few driven lots, but after writing him to say I was forwarding more I had a reply to say that one more lot would suffice for his purpose. On the other hand, I do not wonder why more people do not start bee-keeping on modern lines. When a skeppist wants a queen he has to pay dear for it, but if he has one to sell has a lot of trouble to sell it at any price. I am a constant reader of the B.B.J., and have been much benefited by perusing its contents; indeed, I look forward for its arrival, and I impart to my bee-keeping neighbours what I learn from its pages. We had a poor honey-season in Devon this year, I am sorry to say. Bees have been strong, but the honey-flow was so short that it was over before anything like a satisfactory return was secured. Thanking you for past help, I send name and sign—A DISAPPOINTED DEVONIAN.

THE YORKSHIRE WOLDS AND HEATHER HONEY.

[5682.] I would like to know if any of your numerous correspondents can tell me if any part of the Yorkshire Wolds is good for producing heather honey. I am very anxious to take a hive or two next year to a location where heather honey can be got, and it will be no use my waiting until heather blooms again before I make inquiries. Perhaps some one there who has had experience will kindly give me some information, for which I shall be much obliged. I send name, etc., and sign—GREBE, Doncaster.

"AGRICULTURAL PRODUCE" RATES.

[5683.] The bee-notes of "D. M. M., Banff," are always interesting to your readers, and give most valuable hints to apiarists who are young in the craft. In last week's issue he referred in his notes to the product of labels, and what concerned me most was his asking for an "agricultural produce rate." It would be interesting to me, and, I believe, to many of your country readers who are too far from railways to get information as to rates, to know more about the cost of carriage of honey. I therefore ask—Will "D. M. M." oblige with further particulars on this point, and what is the difference between the ordinary rates and "agricultural produce rates"?—ALEX. ELKINS, Salisbury, November 3.

WINTERING BEES.

[5684.] I beg to thank you very much for reply to my inquiry, which appears on page 420 of B.B.J. I have now got my bees made all right, I hope, for the winter. The frames hang parallel to entrance, and on the division-boards I have tacked two pieces of felt, which, after spacing the frames, makes them just fit in at the front and back of the hives. Of course, I have allowed plenty of room below the front division-board for the bees to pass under it, but the back one fits down to the floor-board. I thought this felt would keep the bees so much warmer, and I do not think it will harbour the wax-moth.—G. W. M., Sheffield.

SOME BEE JOTTINGS.

[5685.] While a friend of mine was cutting up pine logs (imported from Norway) lately with a circular-saw, he came across a hollow log, and he found the saw had cut right through a colony of bees—dead, of course—and as the combs contained not a scrap of honey, it would appear the poor bees had died of starvation. Having read in the B.B.J., earlier in this year, about birds, when catching bees for food, carrying off drones and not workers, my interest was aroused in the question of birds and bees, and I shot several birds seen flying about my hives one day while bees were on the wing, but none of the birds killed (including swifts, swallows, and martins) showed any trace of having captured bees, either workers or drones. I found lots of small flies. Twice this year I have watched the common house sparrow snapping up bees. I drove off the little marauders before giving them time to devour their prey, and in each case the bee's head had been bitten off by the bird before eating the body. In conclusion, I am looking forward to next February, when "J. R., St.

Albans," is going to teach me something about hazel catkins. I see they are now showing growth.—J. SKINNER, Easton, Bristol, November 5.

BEE, FRUIT, AND POULTRY FARMING.

[5686.] Will you permit me to ask if some reader of the B.B.J. will kindly give me a rough idea what would be the amount of capital required to enable me to start a bee and fruit farm of two or three acres? I would propose to plant it with choice sorts of apples, pears, plums, etc., along with small bush-fruits, such as gooseberries, raspberries, and currants, all of which would be grown for market. Then I would ask what number of stocks of bees I should start with in view of honey-production and selling swarms, etc. I may say I hold the third-class expert's certificate, and am able to make my own hives and the usual appliances. In view of honey for sale, my intention is to locate in a good district where good clover-honey is to be had, within easy reach of heather, if possible. I also intend, later on—if desirable—to keep choice breeds of poultry for the production of eggs for setting. A little advice from a practical man would be very highly esteemed. I send name, etc., and sign myself—CONSTANT READER, November 5.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of October, 1904, was £506.—From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

WEATHER REPORT.

WESTBOURNE, SUSSEX,

October, 1904.

Rainfall, 2·6 in.	Minimum on grass, 31° on 29th.
Heaviest fall, ·68 on 6th.	Frosty nights, 0.
Rain fell on 15 days.	Mean maximum, 56·5.
Below average, 1·31 in.	Mean minimum, 44·7.
Sunshine, 103·6 hours.	Mean temperature, 50·6.
Brightest day, 14th, 9·3 hours.	Above average, 2·3.
Sunless days, 9.	Maximum barometer, 30·49 on 13th.
Below average, 20·7 hours.	Minimum barometer, 29·56 on 7th.
Maximum temperature, 66° on 18th.	L. B. BIRKETT.
Minimum temperature, 36° on 9th.	

Queries and Replies.

[3607.] *A Beginner's Queries.*—As a beginner with bees, I have to thank you for helping me more than once, and will be glad if you will again give me a reply to the following queries:—1. I have obtained several catalogues of bee apparatus, and, after perusing them, am inclined to favour the firm whose name I send. As you are aware, I have had very little experience in these matters, and I shall therefore be thankful if you can say if this firm are reliable traders who will treat me fairly. 2. Do you still consider the "Raynor" feeder (shown in "Guide Book") one of the best regulating feeders for the use of a beginner, and where can I obtain it? I do not find it advertised in any catalogues I possess. 3. Then, with reference to frames, a bee expert has advised me not to use frames with slit top-bars for inserting foundation, as it forms a harbour for wax-moth. What do you think of this? 4. Being desirous of knowing the conditions of membership, please give me the address of the B.B.K. Association. I should like you to know that I find the B.B.J. a most interesting and valuable little paper; the "Queries and Replies" being especially helpful to beginners like myself. I think it a pity there is no Bee-keepers' Association in Kent; there surely must be a large number of bee-men in our county. I am writing to the Surrey B.K.A. to ask if I am eligible for membership, being outside their county. Full name, etc., enclosed for reference.—W. E. C., Bromley Common.

REPLY.—1. The firm you name is a perfectly reliable one, and of good repute in all respects. 2. As a regulating feeder, the "Raynor" (illustrated in "Guide Book") is one of the best. Any dealer will supply it to order. 3. The risk of damage by wax-moth, owing to the slit in top-bars of frames harbouring the larvæ of the moth, never troubles an experienced and careful bee-man, who never keeps weak stocks of bees, and strong lots make short work of the small moth, whose larvæ take refuge in slotted top-bars. In any case, the simple and easy method of fixing foundation, without the chance of a breakdown, is well worth the small risk of moth-trouble mentioned. Those who prefer to undergo the labour of wiring all frames, or who use a thick top-bar with groove on its underside will, of course, have no trouble in their methods if well carried out. It is, therefore a matter of choice for the bee-keeper to choose according to the method of working he proposes to follow.

[3608.] *Buying Diseased Stocks of Bees.*—I hired a cottage and premises last spring, and, in doing so, I was obliged to buy fifty stocks of Bees that were on the premises at the time, although I did not know anything about them. I therefore got a friend who understood all about bees, and on examining the hives he found them very badly affected with foul brood. However, he agreed to work them for me, which he did all through the summer, and obtained a fair amount of surplus-honey. In May, by his directions, I put naphthaline balls in all hives, and scrubbed and painted the insides of all empty hives which were to receive swarms. In the month of August we removed the last surplus honey, but nothing has been done to them since. Many of the stocks are now very weak, and some have recently died out. At present I have about sixty stocks. I shall feel obliged for a little advice with regard to what I am to do to save them? My questions are:— 1. Can weak stocks be united so late in the year as this, or is it too late? 2. When should the bees be wrapped up for winter? 3. Should I take off all shallow-frames and put quilts next to brood-boxes? Any help will be esteemed. I send name and sign—NEGLECTED BEES.

REPLY.—1. A skilful bee-keeper can unite weak stocks, even so late as November; but one, placed like yourself, would not be likely to make a success of it. 2. Bees are best prepared for winter at end of September. Any later date involves more trouble and more experience to make a full success of it. 3. All surplus arrangements should be removed when the harvest is over and quilts placed direct on top-bars of brood-chambers.

Having replied to your queries as enumerated, we add a line to say: in such trouble as you are faced with after your unfortunate purchase of diseased stocks of bees, the help of a reliable expert should be obtained—one who knows how to deal with foul brood. Unless you do this, we are not hopeful for your future success.

[3609.] *Painting Hives.—Width of Entrances in Winter.*—1. I shall be obliged by your informing me what is the best time to repaint bee-hives (occupied), and what is the best paint for that purpose? 2. Would Aspinall's enamel be suitable? 3. How wide should the entrances to hives be left open during the winter, say from now onwards? I see in the "Guide Book" (p. 163) it is recommended that the entrance should be opened to six inches, whereas in "Modern Bee-keeping" (page 87) it states that "entrances of hives should be contracted to keep out cold winds." The entrances to my hives are at present open about six inches, but I notice an occasional struggle between two bees on the alighting-board as if they were fighting. This, however, occurs but seldom, say once in the course of an hour or so. Your kind advice on the above points will be greatly appreciated by—W. F. S., Weybridge.

REPLY.—1. Good oil-paint, such as painters use, is best. 2. We do not consider enamel paint suitable for bee-hives. 3. When bees have ceased flying daily and a fear of robbing has passed by the entrance should be about five or six inches wide, and may remain at that width except when cold easterly winds prevail. The entrance should be reduced to half the above width, or less, when bees become more active in early spring and remained narrowed until honey is coming in from outside, unless stocks are very strong, in which case six inches is not too wide.

[3610.] *Moving Hives in Winter.*—I want to move one hive about a quarter of a mile and several others a few yards; will you please say can this be safely done during the months the bees are not flying, say December or January?—M., Windermere, October 31.

REPLY.—Quite safely at any time in winter when the bees have been confined, by cold, to their hives for a few weeks.

[3611.] *Bee-keeping and Fruit-growing as a Business.*—I should be obliged if you would give me your opinion on the question: What part of England or Wales is the most favourable for bee-keeping? I am about to go in for bee-keeping on a large scale combined with fruit-growing, and am anxious to find the best county or district for the former. The question of rent and railway facilities will necessarily be a consideration, as the undertaking is purely a commercial one. I send name and sign—C. E., Derby, November 1.

REPLY.—To be of real value, you should have the opinion of those who have had practical experience on the question. We will therefore be glad if some of our readers, qualified to give a reliable opinion will kindly write us a few lines for publication.

HEREDITY IN THE BEE GARDEN.

By TICKNER EDWARDES.

We were in the great high-road of the bee farm, and had stopped midway down in the heart of the waxen city. On every hand the hives stretched away in long trim rows, and the hot June sunshine was alive with darting bees and fragrant with the smell of new-made honey.

"Swarming?" said the bee-master, in answer to a question I had put to him. "We never allow swarming here. My bees have to work for me, and not for them-

selves; so we have discarded that old-fashioned notion long ago."

He brought his honey-barrow to a halt, and sat down ruminatively on the handle.

"Swarming," he went on to explain, "is the great trouble in modern bee-keeping. It is a bad legacy left us by the old-time skeppists. With the ancient straw-hives and the old benighted methods of working, it was all very well. When bee-burning was the custom, and all the heaviest hives were fore-doomed to the sulphur-pit, the best bees were those that gave the earliest and the largest swarms. The more stocks there were in the garden the more honey there would be for market. Swarming was encouraged in every possible way. And so, at last, the steady, stay-at-home variety of honey-bee became exterminated, and only the inveterate swarmers were kept to carry on the strain."

I quoted the time-honoured maxim about a swarm in May being worth a load of hay. The bee-master laughed derisively.

"To the modern bee-keeper," he said, "a swarm in May is little short of a disgrace. There is no clearer sign of bad beemanship nowadays than when a strong colony is allowed to weaken itself by swarming on the eve of the great honey-flow, just when strength and numbers are most needed. Of course, in the old days, the maxim held true enough. The straw-skeps had room only for a certain number of bees, and when they became too crowded there was nothing for it but to let the colonies split up in the natural way. But the modern frame-hive, with its extending brood-chamber, does away with that necessity. Instead of the old beggarly ten or twelve thousand, we can now raise a population of forty or fifty thousand bees in each hive, and so treble and quadruple the honey-harvest."

"But," I asked him, "do not the bees go on swarming all the same, if you let them?"

"The old instincts die hard," he said. "Some day they will learn more scientific ways; but as yet they have not realised the change that modern bee-keeping has made in their condition. Of course, swarming has its clear, definite purpose, apart from that of relieving the congestion of the stock. When a hive swarms, the old queen goes off with the flying squadron, and a new one takes her place at home. In this way there is always a young and vigorous queen at the head of affairs, and the well-being of the parent-stock is assured. But advanced bee-keepers, whose sole object is to get a large honey yield, have long recognised that this is a very expensive way of rejuvenating old colonies. The parent hive will give no surplus honey for that season; and the swarm, unless it is a large and very early one, will do little else than furnish its brood-nest for the coming winter. But if swarming be prevented, and the stock requeened artificially every two years, we keep an immense population always ready for the great honey-flow, whenever it begins."

He took up the heavy barrow, laden with its pile of super-racks, and started trundling it up the path, talking as he went.

"If only the bees could be persuaded to leave the queen-raising to the bee-keeper, and would attend to nothing else but the great business of honey-getting! But they won't—at least not yet. Perhaps in another hundred years or so the old wild habits may be bred out of them; but at present it is doubtful whether they are conscious of any 'keeping' at all. They go the old tried paths determinedly; and the most that we can accomplish is to undo that part of their work which is not to our liking, or to make a smoother road for them in the direction they themselves have chosen."

"But you said just now," I objected, "that no swarming was allowed among your bees. How do you manage to prevent it?"

"It is not so much a question of prevention as of cure. Each hive must be watched carefully from the beginning. From the time the queen commences to lay, in the first mild days of spring, we keep the size of the brood nest just a little ahead of her requirements. Every week or two I put in a new frame of empty comb, and when she has ten frames to work upon, and honey is getting plentiful, I begin to put on the store racks above, just as I am doing now. This will generally keep them to business; but with all the care in the world the swarming fever will sometimes set in. And then I always treat it in this way."

He had stopped before one of the hives, where the bees were hanging in a glistening brown cluster from the alighting-board; idling while their fellows in the bee-garden seemed all possessed with a perfect fury of work. I watched him as he lighted the smoker, a sort of bellows with a wide tin funnel packed with chips of dry rotten wood. He stooped over the hive, and sent three or four dense puffs of smoke into the entrance.

"That is called subduing the bees," he explained, "but it really does nothing of the kind. It only alarms them, and a frightened bee always rushes and fills herself with honey, to be ready for any emergency. She can imbibe enough to keep her for three or four days; and once secure of immediate want, she waits with a sort of fatalistic calm for the development of the trouble threatening."

He halted a moment or two for this process to complete itself, then began to open the hive. First the roof came off; then the woollen quilts and square of linen beneath

were gradually peeled from the tops of the comb-frames, laying bare the interior of the hive. Out of its dim depths came up a steady rumbling note like a train in a tunnel, but only a few of the bees got on the wing and began to circle round our heads viciously. The frames hung side by side, with a space of half an inch or so between. The bee-master lifted them out carefully one by one.

"Now, see here," he said, as he held up the first frame in the sunlight, with the bees clinging in thousands to it, "this end comb ought to have nothing but honey in it, but you see its centre is covered with brood-cells. The queen has caught the bee-man napping, and has extended her nursery to the utmost limit of the hive. She is at the end of her tether, and has, therefore, decided to swarm. Directly the bees see this they begin to prepare for the coming loss of their queen by raising another, and to make sure of getting one they always breed three or four."

He took out the next comb, and pointed to a round construction about the size and shape of an acorn, hanging from its lower edge.

"That is a queen cell; and here, on the next comb, are two more. One is sealed over, you see, and may hatch out at any moment; and the others are nearly ready for closing. They are always carefully guarded, or the old queen would destroy them. And now to put an end to the swarming fit."

He took out all the combs but the four centre ones; and, with a goose wing, gently brushed the bees off them into the hive. The six combs were then taken to the extracting house hard by. The sealed honey cells on all of them were swiftly uncapped, and the honey thrown out by a turn or two in the centrifugal machine. Now we went back to the hive. Right in the centre the bee-master put a new, perfectly empty comb, and on each side of this came the four principal brood frames with the queen still on them. Outside of these again the combs from which we had extracted all the honey were brought into position. And then a rack of new sections was placed over all, and the hive quickly closed up. The entire process seemed the work of only a few minutes.

"Now," said the bee master triumphantly, as he took up his barrow again, "we have changed the whole aspect of affairs. The population of the hive is as big as ever; but instead of a house of plenty it is a house of dearth. The larder is empty, and the only cure for impending famine is hard work; and the bees will soon find that out and set to again. Moreover, the queen has now plenty of room for laying everywhere, and those exasperating prison-cradles, with her future rivals hatching in them, have been done away with. She has no further reason for flight, and the bees, having had all their preparations destroyed, have the best of reasons for keeping her. Above all, there is the new super-rack, greatly increasing the hive space, and they will be given a second and third rack, or even a fourth one, long before they feel the want of it. Every motive for swarming has been removed, and the result to the bee-master will probably be seventy or eighty pounds of surplus honey, instead of none at all, if the bees had been left to their old primeval ways." —*Pall Mall Gazette.*

PRESS CUTTINGS.

AN IMPROMPTU SERMON.

The Rev. Dr. Linklater, of Stroud Green, who was the special preacher at Chaldron Church on Sunday, was driven from the pulpit by a swarm of bees which had taken possession of the nearest window.

From the lectern Dr. Linklater addressed the congregation on the subject of the intrusion of the bees, instead of preaching from the text he had selected.

Let them preach the sermon, he said, pointing to the bees. Watch them. They want to escape to the fields and flowers, to their home and honey, and the way is open, and manifest to all who look on. There is the aperture—the window wide and open, and nothing to prevent them escaping to the free breath of heaven. But, no. They will go their own way! They mean to escape through the glass. For any length of time they have been attacking the window, and defeat only lends energy to the renewed attack. They will not learn from experience. Within easy reach, a few inches above, there is the open window, and the free breath of heaven. But they have set their obstinate minds to go their way, and they will go no other. They will perish in the attempt. Already there are multitudes of their companions on the window-sill, who struggled and were defeated. These living ones will not learn from the dead. Poor buzzing bees, beating out your beautiful lives to no advantage, when the way to freedom is open, when you could be enjoying the life that God has given you! Is not this a pathetic picture of poor human bees who are thirsting for religious light, seeking that which is impossible in the way they seek it? The picture of the world of to-day, of so many splendid lives, is the picture of those imprisoned bees, seeking the right thing, but seeking it in the wrong way, and in their obstinacy preferring death rather than the life which is theirs through the open window—Jesus Christ.

Notices to Correspondents & Inquirers

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

*** ERRATUM.—Our correspondent, "Expert" (2672, page 433), writes to correct an error in his "Report from Yorks." Sixteen lines from end of his letter should read "130 first-grade sections," not 13, as printed.

MAN OF KENT (Hildenborough).—The Foul Brood Question.—In view of the fact that this matter is now being dealt with by a duly-appointed Committee, no good can result from occupying space in advocacy of such retrograde methods as the let-alone-plan of leaving bees to cure themselves of disease when attacked. It is also futile to cite cases of apiaries managed on modern methods being decimated by foul brood, while bees kept in skeps near at hand on old-fashioned lines, are free from disease. You give your case away when stating that the skeppist in question, after twenty years' experience, knows no more about foul brood now that he did when he started.

READER (Yorkshire). — Reliquefying Honey.—1. The best, and simplest, method of reliquefying granulated honey purchased in tins is to insert the tin of honey (after removal of lid or cap) in a large pan or copper holding sufficient water to cover the tin not less than half-way up. Raise the tin half an inch from bottom of pan to allow water underneath it, and fill pan with water; heat gradually, and keep hot till honey is thoroughly melted and free from granules. 2. Honey does not readily become solid again after melting as above. 3. You must on no account fill the glass jars with solid honey and then melt it. A long and elaborate article on reliquefying honey, as practised in the U.S.A., appeared in the B.B.J. of January 14 last, and may be had from this office.

A. K. S. (Weymouth).—Seeds of Chapman Honey-plant.—We will endeavour to obtain a few seeds and forward if successful.

J. E. S. (Streatham).—We cannot say why the bees have not sealed over the "black honey," of which you complain. No doubt it is mainly honeydew, and may be left in the hive for bees' use. There is nothing abnormal in honey, gathered in July, not yet having granulated, though most of this year's produce has become solid earlier than usual.

E. M. ALGER (Suffolk).—Expert Help.—To obtain assistance from an expert, you must become a member of the County B.K.A. Mr. J. W. Sheppard, Hon. Secretary Essex and Suffolk B.K.A., King's Head Hill, Chingford, will afford the information required if written to.

ONE OF THE 92 (Yorkshire).—Selling Driven Bees.—We published the letter to which you refer in order to afford the seller an opportunity of explaining his difficulty, and say what he intended to do with regard to it. We will write privately with regard to your complaint, but cannot take the responsibility of publishing it, especially when you write under a *nom de plume*.

CANADA (Devonport). — *Canadian Bee Journal*.—The journal named is published monthly by the Goold, Shapley, and Muir Co., Brantford, Canada. Price, one dollar per annum.

Honey Samples.

(MISS) R. G. H. (Darlington).—Sample is largely contaminated with honeydew. It is unsuitable for table use, but may be given to bees as food. It is, of course, regrettable to have so large a quantity of honey on hand, but many bee-keepers are, unfortunately, in the same plight this year.

W. GRAY (Cornhill, Banffshire).—An excellent sample of granulated honey; good on all points. We do not wonder at your "getting a ready sale for it," and congratulate you on having secured a good crop.

Suspected Combs.

W. H. H. (Ipswich).—From appearance of comb it is fairly certain that it has contained foul brood some time, but there is not a trace of brood in cells.

A. E. L. (Bournemouth).—First let us say the very small bits of comb sent are not at all suitable for diagnosing foul brood. Nos. 1 and 3 each contain four or five sealed cells, which look very suspicious, but any former contents have completely dried up and disappeared. The yellow dust in other cells is old pollen infested with pollen-mites. No. 2 shows distinct signs of disease in one of its few sealed cells. Referring to experts' certificates, application should be made to the secretary, B.B.K.A., 12, Hanover Square, London, if you are not a member of a County B.K.A.

Editorial, Notices, &c.

RIFLE SHOOTING

AS A WINTER EVENING PURSUIT.

We have received the following communication from the Duke of Norfolk, with a request for its publication in our columns, a request we have pleasure in complying with. The idea of establishing miniature rifle clubs embodies the spirit of patriotism in one of its highest forms—the defence of hearth and home—nor do we doubt that bee-men will appreciate the force of the Duke's appeal equally with the rest of our country's "manhood."—EDS.

Norfolk House, St. James',

London, S.W., November 4, 1904.

To the Editors, BRITISH BEE JOURNAL.

GENTLEMEN,—1. The season having arrived for taking up the subject of indoor rifle shooting at very short ranges, I should be obliged by your publishing in your columns the following information relating to the subject.

2. The Council of the Society of Miniature Rifle Clubs has devoted itself for the last three years to promoting the class of rifle shooting termed "Miniature," knowing its great utility as a popular teacher of the elementary side of the art of rifle shooting, and also the very small cost at which such knowledge can be gained, compared to the cost of rifle shooting as previously inculcated.

3. Any one wishing to obtain information and advice about this class of rifle shooting can always get it by writing to our secretary (an officer in the Volunteers), at the office of the society, 20, Bucklersbury, Queen Victoria Street, E.C., and can also obtain through him, at the lowest possible prices, all kinds of apparatus, targets, rifles, ammunition, etc., most appropriate for carrying on the game.

4. For game it should be made, the greatest of national games, played with the vigour and strict attention to rules that make for excellence in the practice of any other game, recollecting also and ever that it is but a means to an end, the equipment of the masses of the people up to a certain point in learning how to guard the territories which their forefathers and contemporaries have placed in their charge.

5. We would desire to point out that there are an enormous number of halls and other places, both in the metropolis and throughout the country that are not constantly in use, and that could be readily and at a small cost fitted up for indoor rifle shooting for tradesmen and artisans to the great benefit of the community. Baths, unused in winter, might well be utilised in this manner, in place of being (as is sometimes the case) devoted to music and dancing, and suitable shooting halls and rifle club-houses can be built at no great cost.

6. There is another side to this matter, which we would desire to be laid before the public. Having regard to the support which we have hitherto received from various private sources since we commenced our labours (which we gratefully acknowledge), it might be supposed that we should not be dissatisfied with the result, as over 200 rifle clubs, formed in the metropolis and many parts of England and Wales, in schoolhouses and playgrounds, etc., are now on the books of the society, and we have carried out with much public approval two considerable meetings for miniature rifle shooting—one last year at the Crystal Palace, and the other (in conjunction with the National Rifle Association) this year at Olympia.

7. We have done all in our power to do good, we have sown seed that is bearing good fruit, but, as a matter of fact, we are not satisfied, and for the simple reason that our income is at present altogether insufficient to carry on properly this splendid work. It will surprise many people to learn that notwithstanding more than one appeal through the press and privately, about half of the share of the society in the cost of the great rifle meeting at Olympia this year came out of the pockets of some of the members of its Council. Of course, that cannot be repeated, so manifestly unfair is it that those who do a lot of work gratuitously and from a high public spirit should also be mulcted in purse in consequence of the thoughtlessness or apathy of so many ladies and gentlemen all over the country, who could well afford to subscribe to the expenses of this society.

8. I would like to point out that our Council includes, amongst others, both the late and the present Inspectors-General of Auxiliary Forces, some very capable members of important London banks, and the recently-appointed Governor-General of Canada (Earl Grey). The society is presided over by Field-Marshal Earl Roberts, and in addition to that, it has recently received the high distinction of the approval of H.R.H. the Duke of Connaught (the Inspector-General of the Army), who has accepted the position of patron of the society.

9. Under all these circumstances, we trust that some of the many people who can, if the spirit moves them, very well afford to endow thoroughly useful institutions, may have the opportunity of reading and marking these words, and will favourably respond to the appeal thus made to their generous instincts and wisdom.—I am, Gentlemen (on behalf of the Council), yours faithfully,

NORFOLK (Chairman).

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

*Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "*THE EDITORS *of the 'British Bee Journal,' 10, Buckingham-street, Strand, London, W.C." All business communications relating to advertisements, &c., must be addressed to "*THE MANAGER, *'British Bee Journal' Office, 10, Buckingham-street, Strand, London, W.C."*

NOTES BY THE WAY.

[5687.] The question of foul brood still crops up in our pages, and as the BEE JOURNAL is the medium by which we bee-keepers exchange thoughts and ideas on things apicultural, it is only right that the shady side should be kept within ken. Mr. W. H. Harris (5669, page 432) advocates our substituting the term "bee-pest" as being a less ambiguous and more correct term than "foul brood," but the latter is surely a correct term for a disease to which the brood of bees are subject in the early stages of bee life. In any case, it seems to me that "bee-brood-pest" would be still more correct and complete. The *Bacillus alvei* does not affect the bees, but only the brood, and as dwellers in the hive, the matured bees may have the bacteria or spores about them, or they may not. Anyhow, it does not kill them as it does the brood.

Your correspondent "Will Shakespeare" (whose letter appears on page 436) has collected a goodly number of quotations from the writings of his namesake; but I opine, if one had time and inclination, there are an equal number of quotations by the great "Will" that would as cogently point the other way: my annual tear-off daily calendar bristles with them.

If "W. H., Brilley," will order and insist on having "No. 9" jar with the triangle brand, he will find the jar he wants. If he will send me three stamps for postage I will gladly send him a sample; but I cannot send to all and sundry at threepence each.

The letter of Mr. Hinde, on page 443, is interesting, but the help of the law will not, in my opinion, ever stamp out disease among bees. Take the present system of bee-keeping and the continual exchange there is going on among bee-keepers throughout the world, not only within our own shores, but there is the continual imports of foreign bees from all parts. Some bee-keepers assert that they never had foul brood till the introduction of foreign bees. It is, therefore, probable that an unseen foe arrives, it may be, from some other source outside this country. Then think of the number of bees in hives which exchange hands every year through advertisement in our and other papers. I often notice advertisements of "Bees for Sale" in provincial papers, and no word of foul brood or of any guarantee of healthiness; neither can law make a man open a sealed book—for such is a straw skep—except to the lynx-eyed expert. And so I ask:—Will "law" step in and prevent the sale of goods when the proceeds are for the benefit of creditors? Again, recent numbers of B.B.J. have disclosed the straits advertisers in B.B.J. have been put to to fill orders for driven bees. These may have been driven from healthy stocks, or they may not. Who can say, on starting out on bee-driving expeditions, that all the skeps driven will be healthy? Is "law" to prevent bee-driving? These are only a few of the many ways which present themselves when one thinks of the spread of foul brood within recent years.

Reverting to the recent Conference of Bee-keepers, I think if Mr. Edwards will procure a copy of our Berks Association Report for 1899, he will withdraw his remark, as reported (page 423), that we were unable, owing to expense, to procure statistics of bee-keeping. We have done so at a previous date; but that year—as I am reminded by one who was then busy in our ranks—we sent to every schoolmaster in the country. I well remember our Beedon schoolmaster calling on me, after he had filled up the list, to inquire if I knew of any other bee-keepers. Here is a hint for other County Associations. Who so likely to gather news from all parts of the village as the schoolmaster? Now, children, can you tell me who keeps bees? Why, it is in a nutshell, and on the morrow he will gather the number each bee-keeper has of hives in his garden, except the squire and parson, and these we reached by expert or postcard to gardeners or the District Secretaries.—W. WOODLEY, Beedon, Newbury.

BEE AND POULTRY FARMING.

[5688.] As a weekly reader of the B.B.J., I am always willing to lend a hand to a brother bee-keeper who is seeking information regarding his future welfare. Let me, then, say that bee, fruit, and poultry farming are pursuits which go very well together, and in these pursuits some of us are engaged in this beautiful Vale of Evesham, on the river Avon. With every railway advantage, light soil, and plenty of good local markets, it only needs skill and hard work to make things pay; but if a man has to depend upon what other

people say, and how to do it, he will not only lose his cash (if he has any), but his energy too; and if I were a novice I should certainly go to an experienced farmer of the kind named for a bit of practical schooling. Supposing "Constant Reader" (3686) starts on a small scale like myself—one acre of cherries, one ditto of apples and pears, three of plums in variety, one of gooseberries and currants, two of strawberries, about 200 head of poultry of sorts, and twenty stocks of bees in frame-hives, and then as adjuncts a breeding sow or two, pony and trap (for hire), local newspaper correspondent, assistant overseer and clerk to the parish council, besides holding a few honorary parochial appointments—your correspondents will find that they will have to be up and about as early in the morning as their bees, and go as late to rest, with their coats off in the winter to prepare for the next spring. It so happens in these three pursuits there is all a partial failure in some seasons; and then if you do not make hay when the sun *does* shine, the banking account will be found wanting. Take, for instance, 1903: No fruit, a poor honey return, and poultry doing badly owing to the excessive rain. My advice, Messrs. Editors, is to start on land and situations that are all round suitable and in scope with their means, adding on as circumstances permit.—A Worcestershire Small-holder.

BEE NOTES FROM DERBYSHIRE.

The "Rymer" Method.

[5689.] I saw in B.B.J. a while back a letter from a bee-keeper who had tried the "Rymer" method with his bees. I did the same with two hives, and below I give the results. On May 4 I made the first examination of my stocks for 1904, when my two best hives showed brood on seven frames; the four next best had brood on five frames, and the weakest of the lot on four. Leaving out the three medium, I confine my report to the best two and the weakest lot. For clearness I will call the best Nos. 1 and 2, and the weak one No. 3. Mr. Rymer told us in your pages that he always selected his best stocks, and when they had filled ten frames with brood he put ten more frames on. My hives each hold eleven frames, and when Nos. 1 and 2 had each filled eleven frames with brood, instead of adding ten more frames on top, I cut three pieces of board to fit inside of top brood-box, so that by the aid of these boards and a pair of dummies I could put one or two frames in top box as required. Thus, when I put top box on, I reduced bottom box to nine frames, and put two built-out combs on outside at top, and two frames of brood with a sheet of foundation in the centre.

This worked so well that the sheet of foundation was drawn out and had eggs in the cells within twenty-four hours. I did same to both hives, but at this stage No. 1 left No. 2 behind in progressing. To No. 1 I kept adding sheets of foundation till at one time it had eighteen frames packed with brood, along with eleven frames in top box to make the full number up, then honey began to come in, and I put a super on, but the bees never half-filled it, as the queen began to fail in egg-laying and the bees put honey in top brood-box, which was crowded with bees. No. 2 did not get on so well, never occupying more than fourteen frames, when this queen also seemed to fall off in breeding, and queen-cells were started, as if for swarming. I therefore clipped the old queen's wing, but they altered their minds and destroyed the queen-cells. I afterwards put on a super and got about 10 lb. of good honey from it. This ended the flower-honey season, and I then began to prepare for the moors, and as I had no young queens by me, I decided to let No. 2 rear its own; so three weeks before moor-time I removed the top box and put it on a fresh stand, and a young queen was reared in it. I then united both lots again. I then bought a queen for No. 1, and while hunting the old one up for removal, I had the separate parts of hive—super, top box, and lower box—in different places on stands for half an hour, and the bees began to fight among themselves so fiercely that when I had got all put together again there were about a couple of thousand dead bees outside. When packed for the moors they were little better than hives full of driven bees; in fact, I do not think there were three frames with brood on, and not half as many bees as there was a month before. No. 1 stored plenty of heather honey to winter on, and yielded about 15 lb. of surplus. No. 2 also gathered enough to winter on, and 10 lb. of surplus from the moors.

My opinion of the "Rymer" method is that it will suit any one who lives close to the heather, but for those located some miles away it is not so good, because when the clover fails and honey gets scarce it seems to stop the queen laying for many weeks before it is time for heather-going. On the other hand, when the bees are among the heather they can see another crop coming on, and they seem to keep the queen going in order to be ready for it. I think it would have paid me a lot better had I made artificial swarms from them when brood-nests were full and the hives full of bees; anyway, they proved a failure in my hands on the plan I followed. I might, perhaps, have done better by experimenting with one of the medium stocks. On Mr. Rymer's plan, the hives

should be full of brood as well as bees when taken to the moors. I shall probably give the plan another trial next season, and use only stocks of medium strength for the purpose.

I will give an account of what happened to my stock that was a weak one on May 4 in next week, as this is already long enough. — TOM SLEIGHT, Pilsby, Chesterfield, November 12.

WINTERING DISEASED STOCKS.

[5690.] Referring to query 3608 (page 447) in current B.B.J., what an amount of injury the bee-keeper who signs himself "Neglected Bees" may, without knowing it, do to others if he allows these "weak stocks" of bees to stand the winter! "Uniting" even strong lots of bees at this date is no easy job. To be successful, a warm day must be chosen, and then the bees must be thoroughly well warmed, by rapping the hives and giving puffs of smoke at intervals of a few minutes for about twenty minutes. It also needs, as our Editors' reply says, to be done by a "skilful bee-keeper" to be made a success of. I note that a B.B.J. reader wants seeds of Chapman's Honey Plant, a really useful honey-bee plant; ornamental, too! I have a quantity of seed, so am forwarding some herewith, and will send more if required. —WM. LOVEDAY, Hatfield Heath, Harlow, November 11.

[Much obliged for seeds, some of which have been sent on as desired.—EDS.]

SIZE OF HONEY-JARS.

[5691.] Referring to the letter of your correspondent, "W. H., Brilley," (5676, page 442), on 1-lb. jars, there have been similar complaints from several others in your pages lately. Of course, we appliance-dealers are only tradesmen, and, as such, cannot be expected to have so much grasp of the particulars of our own business as our critics; but, speaking for myself, I am hopelessly at a loss to know what further size jar to have made to suit everyone (or, shall we say, to suit your correspondent?). I would like to ask that gentleman, does honey not vary in weight? And, supposing it does, would not that be a simple reason why a jar that holds 1 lb. of one honey holds 17 oz. of another? I do not speak of, or advertise, my jars as holding exactly 1 lb.; but for several years past I have catalogued and stocked three sizes of so-called 1-lb. jars, viz.: "nominal," "medium," and "full." These jars hold, respectively, 10, 11, and 12 oz. of water. With my limited amount of common-sense, sharpened, one would suppose, by the fact of having to fill the requirements of customers in order to earn my bread and butter, I imagined these three sizes of jars would have met the needs of all bee-keepers, wherever located. Apparently, however, we have not yet succeeded; but may we dealers, in all reasonableness, not ask "W. H." to kindly tell us what capacity (in water, please!) of jar is needed to hold "exactly 1 lb." of honey?—GEORGE ROSE, Great Charlotte Street, Liverpool.

(*Correspondence continued on page* 456.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

It is, we suppose, not too much to say that the apiary illustrated on opposite page represents the most ancient "home of the honey bee" in England, or, indeed, anywhere else that we know of. The venerable abbey within whose precincts the hives stand has, we are told, sheltered successive generations of the busy little workers for over a thousand years; and it is pleasing to see the reverend bee-keepers who have charge of the apiary to-day, clad as their predecessors would be in the far-off days, still carrying on the craft, though the straw skep has perforce given place to the frame-hive and modern methods. The figures seen are those of Brother Colomban (well known to B.B.J. readers by his contributions to our pages) and his colleague, Brother F. Maurus.

For the rest, we need make no addition to the following notes, written at our request by Br. Colomban:—

"My earliest recollection of bees dates back to my boyhood in Germany, when my uncle (who had some twenty skeps) showed me the bees at work through a small glass window fixed in the skep. I well remember the loft where he used to put them during three or four months of the severe German winter. During that time the skeps were covered with a kind of carpet, which, although allowing plenty of air, prevented the light from inducing the bees to leave their hives. All this made a deep impression on my young mind and filled me with admiration for the little labourers, of whom so much loving care was taken.

"I did not, however, take any practical part in bee-work whilst at home. It was only after coming over to England, some twelve years ago, that I got in close touch with the bees and experienced a mild attack of the complaint known as 'bee-fever.' In this venerable place, more than a thousand years old, known as Buckfast Abbey, as in nearly all monastic houses of ancient times, the bees have always found a shelter. Their produce was highly appreciated, the honey being used for household and

medical purposes, while the wax was chiefly made into candles, no other material than pure beeswax being allowed to be burnt in the church.

"But, to come to our own times, let me first say my bee-keeping began under rather unfavourable circumstances. The bees had been neglected, and during a severe winter the whole lot (eight stocks) perished outright! Some driven bees were then purchased, but, like the rest, they were in a poor state when I was appointed to take care of them. The hives and frames were all sizes, and, of course, not interchangeable. However, I began to read bee literature, and, having profited by its teachings, I secured 400 lb. of surplus honey in my first year. This result was regarded as marvellous, for during the ten or twelve previous years the Abbey Apiary had not produced 2 cwt. of honey in all. About this time I made the acquaintance of the Secretary of a B.K.A. in France, who sent me the 'Abeille Bourguignonne,' and helped me by advice. I had also some of the best German bee-books. It was in them that I noticed the great esteem German bee-keepers had for our Senior Editor, Mr. T. W. Cowan. This made me desirous of knowing something about him, too, when I chanced to come across some old numbers of the B.B.J. and also the first edition of the 'Guide Book.' Later on I induced our Rev. Procurator to get the B.B.J. for me and to join the Devon B.K.A.

"When I had acquired a sufficient store of knowledge with regard to bee-craft on modern British methods I began to put things into shape in our apiary. Until then we had had the French system with huge hives, and, as already said, all kinds of frames. Finding the hives too long (some held eighteen frames), I tried the plan of having a nucleus colony at one end of each stock, so that if a queen got lost, or came to grief, the other one would be ready to take her place. On this plan, the bees were allowed to communicate by a small hole made in the dummy which divided the two lots, and during the honey-flow they worked amicably together in the same super, a queen-excluder being put over the nucleus. This went on all right for some time. But when the swarming season came the two lots of bees invariably swarmed together. It was most amusing to see the bees rushing out from the two doorways, but owing to this fault the plan had to be abandoned, and, in order to secure the end in view, I made special hives for nuclei. These hives are divided into four parts, each nucleus being on three or four frames, with a feeding-chamber below. When these nuclei become overcrowded, all their brood is removed and used for

ST. MARY'S ABBEY APIARY, BUCKFAST, DEVON.

strengthening other stocks. This latter plan has been successful with me so far. The small lots of bees, being side by side, keep each other warm, and I have been able to winter them safely on so few as two frames by feeding entirely on soft candy when the combs contained no stores in the autumn.

"Though I have been troubled at times with foul brood, through the carelessness of neighbours, I claim to have been fairly successful in combating the pest, seeing that I have never lost a single stock through the disease. I have now thirty-two colonies in charge, all of which worked well in supers this year; and also a few nuclei. It would take too long to relate the varied experiences that have occurred during my management of our apiary, so I will only say it now bears a different aspect from what it was a few years ago. All our hives contain the B.B.K.A. standard frames only, which is a great advantage. Two years ago I was granted a helper in the person of Br. F. Maurus, who spares neither time nor trouble in order to secure the welfare of the bees and comfort of the bee-keeper, and to embellish the apiary in general. He has made or repaired nearly all our hives on a system which I think is peculiarly his own, and has devised several ingenious things for ventilation and feeding. Above the frames we use thin boards about three inches in breadth. There are four or five of them on each hive, and I find them more convenient than the usual quilt. The boards do not fit close on top-bars, there being a quarter of an inch bee-space provided by strips of wood nailed on the boards. I have found that after several months it was as easy to remove them as on the first day. The bees had not propolised them at all, as they always do the quilts when used.

"In closing these already too copious 'notes' I wish all readers a honey season next year such as will cause us to forget the bad ones of the past."

(*Correspondence continued from page* 454.)

TEACHING BEE-KEEPING

TO CHILDREN IN SCHOOLS.

[5692]. I remember seeing in B.B.J. a short time ago letters respecting bee-keeping being taught in schools by way of lectures and exhibiting live bees in observatory hives. This idea seems to have been carried out by some bee-keepers with the consent of the schoolmasters, who were very pleased at the idea. I myself made an observatory hive with ventilating holes and glass side to hold one frame. I took this to three different schools, and was surprised and pleased to see how much interest the children took in the live bees, and what I told them about bees and bee-keeping. At one of the schools, on my promising a 1-lb. jar of honey for the best essay on what was shown and told them, the children were delighted at the idea, and I received over forty papers. I did not at the time realise how long it would take me to read them over in order to select the best; however, I selected three which I considered equal in merit, and awarded a half-pound jar to each of these. I myself think it would be useful to do a little teaching of this sort to children in addition to giving instruction in bee-keeping, poultry-farming, gardening, etc., to their elders.—Thos. Norman, Northampton.

PARTHENOGENESIS.

[5693.] Most bee-keepers know that eggs laid by a fertile worker, or an unfertilised queen, produce drones, and drones only, but few, I should imagine, know how and when the germ which produces drones from eggs so laid enters the "ovarian follicle," especially in the case of a fertile worker, seeing that we are told only a vestige of an appendicular gland is present. I, for one, should be very glad to have it explained how the germ of life is introduced into the drone eggs, or how it is acquired by the workers or unfertilised queen bees. Again, why designate queens that lay eggs which only produce drones as unfertile, and workers which occasionally do the same thing as fertile, seeing they both produce life in the form of drones? We are dealing with a matter of parthenogenesis, I admit, but anything that is capable of producing life is, to my mind, necessarily fertile, inasmuch as it produces life.—E. Geo. Ive, Notts, November 14.

"AGRICULTURAL PRODUCE" RATES.

[5694.] May I inform Mr. Elkins (5683, page 445) that no special labels are needed when sending honey and wax by rail? If he will just write plainly on an ordinary label the words "Farm and Agricultural Produce" the goods will be sent at the following rates:—Up to 20 lb., 6d. per package; over 20 lb. and up to 30 lb., 8d.; over 30 lb. and up to 40 lb., 10d.; 50 lb., 1s.; 60 lb., 1s. 2d. Sixty pounds is the limit of weight for one package which goes by passenger train, and is thus delivered more quickly and safer than by luggage. In this way, butter, cream, cheese, eggs, honey, flowers, seeds, fruit, vegetables, mushrooms, meat, game, dead rabbits, and dead poultry can be sent. I have copied the several items named above from the table which the Great Central Railway have had printed. Goods sent by other railways in

which there is a connection with the Great Central can travel at this rate, and there is no limit with regard to distance. I hope this may be of service to bee-keepers in general.—W. STACEY, Sheffield, November 10.

REGULATING BEE-FEEDERS.

[5695.] I note your reply to "W. E. C., Bromley," on page 446 last week, and would like to say that as I wanted "Raynor" feeders during the past season, I ordered half-a-dozen successively from four of the admittedly largest and most up-to-date appliance-makers in England; but one after the other sent me feeders somewhat on the "Raynor" principle, but certainly not as described in the "Guide Book." I send name for reference and sign—WORKER BEE, November 11.

Queries and Replies.

[3612.] *Late Feeding.*—I have just had a stock of bees in skep given me (a this year's swarm) which has not been fed up, and as the skep contains little honey, I ask what you would advise me to do? 1. Is it possible to feed the bees with syrup, using artificial heat, *i.e.*, placing hive in hothouse for the time, or would the sudden changes kill them all off? 2. Is it possible to feed with candy through the whole winter? I shall, of course, drive bees next summer as soon as possible. I enclose name for reference and sign—LARBEE, Sidcup, Kent.

REPLY.—1. It is "possible," of course to give bees sugar-syrup in cold weather by keeping the hive in a warm temperature, as stated, but it would be unwise to do so for many reasons. 2. Bees have often been kept alive all winter on good, soft candy, but the latter would need to be renewed as required, and not allowed to become as hard as stone on the hive, as it might do if not examined at intervals to see that the bees were taking the food.

[3613.] *My First Year's Bee-keeping.*—Would you kindly examine comb sent and advise me under the following circumstances?—I bought four stocks of bees last January, and they seemed all right at time of purchase. In March one stock gradually died out—at least I think so, as I only found a few dead bees on the floor-board. In April I bought a strong stock in a skep (it was full of bees), and placed it above on the frames of hive the others had left, in order that the bees might transfer themselves to the frame-hive below. They worked down very well, and the queen soon started breeding below. I removed the skep in September, and left six frames of food in brood-chamber. Then, after packing down, I fed the bees for a time, then left them for a week unfed, and, on examining the hive I found the bees gone; at least, there was not a cupful left. I have, therefore, cut out a piece of comb from the middle frame to send on, and ask if you will kindly tell me through the B.B.J.—which I have taken ever since I first began with bees—if comb sent shows foul brood? Trusting I am not occupying too much of your time, I send name, etc., and sign—ANXIOUS, Bisley, November 12.

REPLY.—There is no trace of disease in comb sent, but most of the cells are partly filled with fresh pollen. The general appearance of comb points to the conclusion that what you have regarded as six frames of sealed food left in body-box has been merely a surface-covering of honey, the bulk being pollen only. There is not a particle of food left in the comb, therefore, the bees may have either died of starvation, or, perhaps, have deserted the foodless hive and joined one of your other stocks near at hand.

[3614.] *New Zealand Bee Journal.*—I should be glad if you can tell me in the B.B.J.:—1. Where I can obtain a *New Zealand Bee Journal*, and if weekly or monthly; also its price? Is there a bee journal for the Argentine Republic, or any other book that would give me a fair idea of the country?—W. WRIGHT, Preston, Lancashire.

REPLY.—1. There is no bee journal exclusively for New Zealand, but the Australian monthly *Bee Bulletin* circulates in Australia, New Zealand, and the Cape of Good Hope. It is published by E. Tipper, West Maitland. We will send you our file copy for perusal and return if a stamped address is forwarded to us. 2. There is no bee journal for the Argentine Republic, nor can we give you an idea of its suitability for bee-keeping.

[3615.] *Loss of Queens.*—I examined a stock of bees a week ago, and was very much surprised to find two queen-cells, beautifully shaped, and each containing a young queen. The day before I examined the hive I noticed that the bees were being robbed of their stores. There were six frames covered with bees and some sealed brood. I do not know what could have happened to the queen. She certainly did not die of old age, as they were a cast this springtime; neither did she get crushed by accident in handling, for I had not lifted a frame up since the bees were hived. I should be very pleased if you would advise me in the B.B.J. what to do with the bees. Do you think it will be best to set them

over another stock or to drive them and unite by shaking out in front?

Both my father and grandfather kept bees in skeps, and neither of them ever heard of foul brood, and I know several old people who have kept bees in skeps for the best part of their lives, and say the same. The majority of skeppists take up the old stocks and first swarms and leave the casts, which, of course, are generally lighter than first swarms, so I suppose that as their bees always had clean combs, young queens, and pure, wholesome honey to winter on, they did not get foul brood.—W. ALLEN, Uppingham, November 14.

REPLY.—The easiest method of uniting in your case will be to place the queenless bees above the colony that needs strengthening, and separate the two lots by a sheet of brown paper, with a hole 4 in. square cut in centre; lay a piece of perforated zinc over this hole large enough to cover the latter, and, in addition, prick a few holes in paper—not large enough for a bee to pass through—and leave the rest to the bees themselves. They will gnaw the holes larger and pass through to the upper box without quarrelling. In a few days remove the paper, and allow free intercourse between both lots.

[3616.] *Cleaning Wax Extractors.*—Could you kindly tell me in next B.B.J. the best way to clean a wax-extractor? I have tried boiling hot water, but this does very little, the wax sticking very hard to the tin parts. I send name and sign—A KENTISH BEE, Tonbridge, November 14.

REPLY.—The simplest way is to put the extractor into a copper of boiling water, below the surface, for half an hour, when most of the wax—or all that needs to be removed—will rise to the top and may be lifted off when water is cold.

Echoes from the Hives.

Menai Bridge (North Wales), November 10.—Perhaps it is owing to my being still "not up to the mark" in health that makes me so despondent just now, but while staying by the Menai Straits for a few weeks' convalescence, I thought an "Echo from the Hives" here may possess interest for readers. A week ago (early November) bees were flying freely and very busy on ivy, etc. Queens also were actively at work, and in several hives we opened there were large patches of brood on two or three frames. But, alas! what waste of bee-life was visible. One friend has his hives located near the suspension bridge, and day by day, as the bees are tempted to cross the straits for the ivy-bloom on the far side, hundreds are blown down or fall into the water, and a short struggle ends their lives. —GEORGE ROSE.

THE DELIQUESCENT POWERS OF HONEY.

Much has appeared in the *American Bee Journal* about the water-gathering powers of honey, some writers taking the ground that honey has no such power, and others taking the other view. On page 30 we get the most extreme statement of the former. Mr. Johnson not only informs us that honey will not gather moisture, but that no liquid has that power—a statement which he would find most difficult to prove, except in a technical and hair-splitting way.

There are many liquids which are, in the common meaning of the term, deliquescent, and honey is one of them. I have recently tried an experiment to prove that honey has this property, and though my experiment is not absolutely conclusive, it will probably satisfy most of the readers of the *American Bee Journal.*

A watch-glass was cleaned and counterpoised on a balance of extreme delicacy, a piece of paper the size of the capping of a worker-cell being sufficient to throw the balance out of equilibrium. There was then placed on the glass 5 grams (about a thimbleful) of honey—a well-cured honey of first quality. Honey was added or subtracted by a pin-point till a 5-gram mass was excellently balanced. The balance was left with the glass of honey on the pan, and the counterpoise on the other pan for several days, being weighed each day. Day by day it lost weight.

The air in this locality during the present winter has been extremely dry much of the time, the humidity running as low as 30 not infrequently. A saucer of honey set aside has gummed over instead of getting thin as so often happens. So with the honey in the experiment, it got thicker and thicker, and showed no signs of gathering moisture. I saw that I should have to create a moist atmosphere for it, and on the fifth or sixth day began to burn a jet of hydrogen in the balance case a few minutes daily. Burning hydrogen furnishes pure water. Fearing to injure the delicate balance by the moisture, I placed the glass under a bell-glass under which water had been boiled, this being first done on the eighteenth day. This was continued till the close of the thirty-third day.

On the thirty-third day I dried the bell-glass thoroughly, and put under it with the watch-glass of honey two shallow dishes of calcium chloride. This chemical has the power to take water from the air, and is used to dry air with. My purpose was, of course, to dry the air and thus cause the air to take away from the honey the moisture which it had accumulated. These conditions were continued for nine days.

The watch-glass of honey was weighed daily when possible. Business and an attack of the grip prevented an unbroken record. I offer below the results, which will tell a story for themselves.

It is to be observed that the loss or gain in weight is not uniform, a fact which is to be accounted for by variations in temperature, humidity of outer air, and irregularity in replenishing the moisture in the air under the bell-glass. I incidentally discovered that air will get dry though there be the tiniest crack for the diffusion of the enclosed air with that outside.

I say that my experiment is not absolutely conclusive, for the reason that I did not analyse the honey before and after the experiment, but only a very obtuse person will question the conclusion that honey will absorb water. Several circumstantial facts point that way. The honey grew thinner as it increased in weight. As the honey grew thinner it gained in bulk. At first there was only a thimbleful, but at the time of the greatest weight there were about two thimblefuls. The increase in weight varied very regularly with the amount of water in the air. The honey grew thicker as it lost weight. The honey did not differ in appearance at the close from what it was at the start of the experiment.

I tasted the honey at the close. Though it had not lost body nor sweetness it had lost all its fine flavour and tasted rank. Mr. Johnson will doubtless say that this proves decomposition, but not I. I believe that it simply means that the volatile oils which the honey had at first had been lost, and that the foul air from the burning alcohol lamp had given a new flavour. Flavours are hard to weigh on a balance, though they may be weighed with money.

Had decomposition of any sort taken place it is reasonable to suppose that gases would have appeared in the honey. This was not so. At all times the honey was clear as jelly, and whatever was gained or lost was through the surface of the honey. This last fact is seen from the circumstances that when the honey was losing weight the surface honey was thicker than that below, while the reverse was true when the honey was gaining weight, the surface then being thinner.

In trying to prove that honey is deliquescent I have at the same time proved it to be efflorescent. This is much like saying that a thing is white and is also black, for deliquescence and efflorescence are directly opposed properties. Yet the honey gained water when the air was humid, and lost water when the air was dry. It would seem that there is a certain (possibly not fixed) humidity point above which honey will gain moisture from the air, and below which honey will yield water to the air. I think that this point ranges near 60 per cent. of humidity. I have not proved it.

It will be observed that the honey weighed the most on the thirtieth day, when it weighed 7.045 grams, a gain of over 2.5, or about 41 per cent. After it had reached this weight I found difficulty in keeping the air sufficiently moist to permit the honey to hold that weight. This suggests that honey as it gains water becomes less deliquescent, and should give up water though the humidity is over 60 per cent., say.

Practically it makes no difference to the bee-keeper whether the honey actually takes in water or not, but it does mean much to the bee-keeper to keep well in mind that honey and air should have a water-tight, and air-tight, partition between them.

	Grams.
Weight at the start	5.0000
,, ,, close of 1 day	4.98
,, ,, ,, ,, 2 days	4.96
,, ,, ,, ,, 3 days	4.9465
,, ,, ,, ,, 4 days	4.935
,, ,, ,, ,, 5 days	4.943
,, ,, ,, ,, 7 days	4.962
,, ,, ,, ,, 8 days	4.975
,, ,, ,, ,, 9 days	4.995
,, ,, ,, ,, 10 days	5.016
,, ,, ,, ,, 11 days	5.005
,, ,, ,, ,, 12 days	5.11
,, ,, ,, ,, 15 days	5.125
,, ,, ,, ,, 16 days	5.262
,, ,, ,, ,, 17 days	5.457
,, ,, ,, ,, 18 days	5.677
,, ,, ,, ,, 19*days	6.042
,, ,, ,, ,, 23 days	5.735
,, ,, ,, ,, 24 days	6.053
,, ,, ,, ,, 25 days	6.32
,, ,, ,, ,, 26 days	6.545
,, ,, ,, ,, 29 days	6.795
,, ,, ,, ,, 30 days	7.045
,, ,, ,, ,, 31 days	6.86
,, ,, ,, ,, 32 days	6.837
,, ,, ,, ,, 33 days	6.98

Calcium chloride placed in bell-glass.

	Grams.
Weight at close of 4 days	5.253
,, ,, ,, ,, 5 days	5.137
,, ,, ,, ,, 6 days	5.035
,, ,, ,, ,, 9 days	4.9973

* Taken sick at this time.

—ALLEN LATHAM, in *American Bee Journal*

Notices to Correspondents & Inquirers

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

*** A correspondent writes as follows:—"Would 'D. M. M.' kindly explain further as to his method of clearing supers without the use of a bee-escape, etc.? I always find that the bees take possession again if they find an opening even so small as 3-16ths of an inch, so I cannot understand how it is managed. If the gentleman in question will make this plainer he will greatly oblige.—NOVICE."

W. H. BROWN (Withington).—Selling Driven Bees.—We are glad to have reply to our inquiry concerning the complaint of "One of the 92," referred to on page 450, and judging by the facts stated it is evident there are two sides to the case. Now, however, that your assurance is given that the fates were against your filling all orders as quickly as purchasers wished, we see that the fault was not your own, and hope those who complained will agree with us.

A. J. EASTO (Nunhead, S.E.).—Membership of County B.K. Association.—The Kent B.K.A. is, unfortunately, in a comatose condition just now, with no hon. secretary to whom you could write with regard to membership. The nearest active County B.K.A. is that of Surrey, of which the hon secretary is Mr. F. B. White, Marden House, Redhill. That gentleman might help you if applied to.

T. HAMMOND (Wickham Bishops).—Preparing Honey for Market.—Much obliged for photo of sections and jars of honey, put up and labelled for market, which looks very well, as printed direct from negative on sensitised postcard. But if reproduced on tone-block for ordinary print, the labels would not be so sharp or even readable in our pages, and its value in a great degree lost.

F. J. G. (Sidmouth).—Dealing with Foul Brood.—Since you ask for our views regarding "cures" for foul brood, we emphatically assert that there are no "prompt and easy cures" for *Bacillus alvei*, or foul brood. The remedy you name is simply a disinfectant, neither better nor worse than many others—which prevents the growth of the bacillus but has no effect whatever on the spores of bee-pest or foul brood. This is a fact well known to any scientist who has studied the subject.

W. G. WOODWARD (Glos).—Insurance for Bee-keepers.—If you are a member of the County B.K.A. apply to the hon. secretary for particulars. If a non-member, write to Mr. E. H. Young, Secretary B.B.K.A., 12, Hanover Square, London, W.

G. H., (Cambridge).—Defaulting Honey Buyers.—1. If we can obtain the address you want by private inquiry it shall be forwarded; but we cannot do it by advertisement. 2. Photo received with thanks. We are having a tone-block engraved from it.

A. McD. (Fairlie, New Zealand).—Market Prices for Honey and Beeswax.—It need cause no surprise that we do not quote market prices for honey in England as is done in American bee papers in the U.S.A., because the respective conditions are entirely different. As a matter of fact, there are no regular wholesale honey merchants, whose exclusive dealings enable them to quote prices they can give for honey by the ton. The only known firms who handle honey and wax in this country are the produce brokers of the shipping centres, to whom produce is consigned for sale on commission. These transactions are mainly sales by public auction, and at these the lots go to the highest bidder.

FAIR-PLAY (Leicester).—Experts and Foul Brood. — We are obliged for your letter, but may say the subject to which you refer is now being dealt with by a duly authorised committee appointed by the County Bee-keepers' Associations, and you may rest assured all the points you mention are being considered by those well able to decide what is best for the bee-industry as a whole.

E. PIDDOCK (Alsager).—Buying Driven Bees. — The reply to a communication sent from this office regarding a similar complaint to your own appears on this page, to which please refer. Without wishing in the slightest degree to condone bad treatment of customers by our advertisers, we can only say that the case we inquired into was met to our satisfaction; and it is not easy to see what we can do further in the matter. Of course you have a legal remedy, as mentioned, and it might be well to adopt the one you propose to try.

Honey Sample.

H. WADDINGTON (Borobridge).—We must charitably suppose that your customer is unacquainted with the characteristic (and delicious) flavour of heather honey, of which your sample mainly consists. We consider it an exceedingly good honey for table use.

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

The monthly meeting of the Council was held on Wednesday, November 16, at 105, Jermyn Street, S.W., Mr. T. I. Weston occupying the chair. There were also present Miss Gayton, Colonel H. J. O. Walker, Messrs. D. W. Bishop Ackerman, W. Broughton Carr, E. D. Till, Ernest Walker, and the Secretary. Letters apologising for inability to attend were read from Mr. T. W. Cowan (Chairman), Hon. and Rev. Henry Bligh, Rev. W. E. Burkitt, R. Godson, W. Richards, F. B. White, and W. Woodley.

The minutes of the previous meeting were read and confirmed.

The following new members were elected, viz. : —

Mr. T. E. Lander, Blairhill, Rumbling Bridge, N.B.

Mr. J. C. Mason, 93, Geldeston Road, Upper Clapton, N.E.

The Finance Committee reported that they had examined the accounts to date, and gave particulars of receipts and expenditure. The report was approved.

A report by the Secretary showed that thirty-six candidates for second-class expert certificates had sent in their names. A list of twenty-two superintendents nominated to officiate in the different districts was brought forward, and the appointments duly confirmed by the Council.

The Sub-committee appointed to amend the Bill for the Better Prevention of Bee-pest presented their report in the form of the amended Bill, and draft circulars to secretaries of County Associations. A number of letters on the subject from absent members of the Committee were read and fully considered. Ultimately the draft Bill, with one or two slight alterations, was approved, and the Secretary instructed to order a supply for distribution, with the object of securing support from the societies, and, through them, the County Councils, and thus convincing the Board of Agriculture and Parliament of the demand and need for such a measure as is proposed.

The Secretary was also authorised to again write to Mr. George M. Saunders asking him kindly to forward for the information of the Committee the correspondence between himself and the various Associations and County Councils, in order that the Committee may be in possession of knowledge as to the precise negotiations, and in a position to act accordingly.

The next meeting of the Council will take place on Wednesday, December 21.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

FOUL BROOD LEGISLATION.

[5696.] In your issue of October 13, in the report of meeting of Conference with county delegates, the Chairman of the British B.K.A. is reported to have stated (*vide* page 403), that although the County Councils he had named intended to petition the Board of Agriculture, they had not yet done so. This statement was not correct as regards the County Council of the Parts of Lindsey, and I now have the pleasure to enclose you a copy of the letter sent to the Board of Agriculture on *July 30*, together with covering letter from the County Council office.

I shall be glad if you will kindly publish this letter, and the letter to the Board of Agriculture, in your next issue, when perhaps the Chairman of the B.B.K.A. will revise his statement so far as this County Council is concerned. As delegate for the Lincolnshire B.K.A., I did not attend the meeting in October, as we had already done all that was requisite to bring the opinion of our Association before both the B.B.K.A. and the three County Councils of Lincolnshire.—F. J. Cribb, Vice-President Lincs. B.K.A., November 15.

Office of the County Council,
Lincoln, November 14, 1904.

Dear Sir, — I now enclose herewith copy of my letter in July last to the President of the Board of Agriculture with reference to the bee-pest. I am sorry I omitted to send this on Friday last as promised.—Yours truly,

Chas. Scorer.

Charles Thompson, Esq.,
Gainsborough.

Office of the County Council,
Lincoln, July 30, 1904.

[Copy.]

My Lord,—At the quarterly meeting of the Lindsey County Council, held yesterday, it was pointed out that the highly in-

fectious disease amongst bees called foul brood, or bee pest, is extending very rapidly not only in this, but other counties, and that for preventing the spread of this disease, and for protection of apiaries generally, a Bill has been promoted for empowering County Councils to appoint an inspector who will be empowered to visit any suspected apiary, and for enabling the Council to prohibit the sale or movement of infected bees and hives within this area.

The County Council are much impressed with the importance of immediate action being taken for the preservation of healthy bees, and they cordially support the proposed Bill. I am instructed, therefore, to ask that the Board of Agriculture will to the utmost of their power press forward the efforts that are being taken for obtaining Parliamentary sanction to the Bill in question.—I am, your Lordship's obedient servant, CHAS. SCORER

The Right Hon. the President,
Board of Agriculture and Fisheries,
Whitehall Place, London, S.W.

[The above letters were submitted to the Chairman of the B.B.K.A., from whom the following reply has been received for publication.—EDS.]

"I have nothing to revise with respect to my statement on page 403, which was based upon what I was told at the Board of Agriculture at my interview on October 5 last—viz., that no petitions had been received from any County Councils. It was not until a subsequent visit that I paid the Board on October 31 that I learned that Lindsey and Devon County Councils had been heard from in favour of legislation. This was officially reported in an editorial on page 431 of B.B.J. of November 3. I do not know when the Board of Agriculture heard from Lindsey County Council; but no doubt the officials of the Board would be able to say on what grounds their statement to me on the 5th was based. I know, however, that the Devon County Council's letter was not received until October 20, although Mr. Saunders had stated in his circulars so long ago as June last that Devon *had* petitioned, and he insisted upon this in his interruption contradicting my statement at the meeting on October 6.

I would also say that at the time of my last interview with the Board on November 1, nothing had been heard from the Kesteven County Council, although the latter was stated to have petitioned. If, therefore, any mistake has been made, it does not rest with me, but with the Board of Agriculture. In any case, it would show that only one out of the three County Councils who intended to communicate with the Board of Agriculture had then done so.—THOS. WM. COWAN, Chairman B.B.K.A., Pine Grove, Boscombe, November 18."

AMONG THE BEES.

"A WELL-APPOINTED COMMONWEALTH."

Creatures that by a law in Nature teach
The art of order to a peopled kingdom.

PART II.

[5697.] *Their Skill.*—The almost perfect hexagonal cell, with its exquisite design and marvellous construction, displays one of the best specimens of the bees' skill. But we have it further exemplified in innumerable instances, such as the rearing of the young, the storing of bee-bread so that it may not deteriorate, the capping of the honey to preserve it for a long period, the special capping of the larvæ, the peculiar construction of the queen-cell, the admirable manner in which they construct their transition cells and change from worker to drone comb, their adaptability when any untoward event occurs, such as a breakdown of foundation, their close clustering when comb-building, their ability to find nectar in flowers, their instinct in forsaking plants yielding a small supply for those secreting abundantly, even when these latter are far distant, their intelligent founding of a new home, their astonishing power of adapting themselves to the special preparations made by their keeper before they are hived—all these simply require to be mentioned to show the bees' marvellous skill.

Their Prescience.—We see in innumerable instances a care, a foresight, and a prevision almost surpassing that of human beings in providing even in anticipation of any perceptible real need for certain contingencies. Our observations of this marvellous prescience becomes an event of such common occurrence that we accept them as instances of the inevitable, and as if they were a mere matter of course. We simply acquiesce in their proceedings and set them down as a result of Nature's laws, a resource on which we too often fall back when the explanation is deep down beyond the depths which we can fathom. Properly studied, however, we, with all our wisdom, acquired from the ages, must acknowledge that there is something here beyond what our weak philosophy can explain. Nowhere is this wonderful foreknowledge more marvellously exemplified than in the deposition of a worn-out queen and the substitution of one on whom they bestow every chance of becoming a more prolific egg-layer.

Their Talk.—We cannot often fathom it, for it is a language far beyond our compre-

hension, so that we can seldom interpret it. Yet we know there goes on in that dark interior frequent conversation and a regular system of consultation which solves riddles, brings light out of darkness, and order out of chaos. The man who contends that bees cannot talk has failed to grasp the most elementary problem which confronts the investigator, who sets himself to elucidate the dark places of beedom. We see many instances of combined consultations far in advance of a simple affirmative or negative decision on casual occurrences, which lead us to conclude that something like reasoned-out discussions are carried on for lengthened periods, and occupy the attention of large bodies of workers. And at times the whole community holds a bee-convention, when some hard problem affecting the state as a whole has to be settled by the united voice of the commonwealth.

Their Breeding.—The result of the first order given to all animated creation to increase and multiply and replenish the earth, is seen in the case of bees in their admirable arrangements for carrying on the race, and they, at least, obey the injunction so perfectly that few insects even can in any way excel them. All the increase in the population of the hive depends on the labours of one single perfect female, yet she, were it not for the wise prevision of every bee in the hive, might be as they are now; but, selected out of tens of thousands of other eggs or larvæ, they have transformed her into a new creation! Still, it is on their wisdom, and according to their dictates, that the rate of increase depends, for it is on the withholding or dispensing of the special chyle-food expressly manufactured by them for the occasion that the queen's powers of ovipositing really depend. Therefore, it is still on the wise intelligence of the workers that the destiny of the colony hangs, and their fiat on this as on other questions has really the force of a fixed law.

Their Wisdom.—We feel that we are out of our depths, that here is something beyond our comprehension, and which is unfathomable to our boasted higher reasoning powers. We grope as in the dark, and are well content to add here a little and there a little, as the fruits of a long term of close and patient observation, to the already existing knowledge in regard to this highly gifted and intelligent little insect. At times we hug the flattering unction to our soul that we have discovered the hidden mainspring as it were of these mysterious transations, and then some inexplicable enigma leaps up which quite extinguishes our theory and makes us feel that once more we have come to a point where the deep and vast unknown confronts us. We know that it is not mere blind chance which guides them in their acts, and that their attainments are secured by well-reasoned-out principles, all leading up to a given point, which is necessary for the comfort, well-being, or even existence of the citizen army.

Their Ethics.—No code can be set down in any degree of completeness, but, at least, many principles may be enunciated which guide and direct their conduct:—

(1) Their laws make it as easy as possible for every citizen to do what is right, and as hard as possible to do wrong.

(2) It is a first article in their code that there should be a desire for Perfection, even in trifles. "Trifles make Perfection, but perfection is no trifle," might be set down as their guiding motto.

(3) The social unit cannot be less than the entire colony, so each single member of the community takes a delight in the well-being of all the others, or at least of the colony as a whole, and subserves her own desires and inclinations, if she has any.

(4) There is going on an almost ceaseless renewal of the units, and the population is constantly being reinvigorated with fresh life.

(5) The traditions and principles are regularly being handed on.

(6) Acquired habits, mainly depending on treatment and environment, are stereotyped and perpetual.

(7) While gifted with the spider sort of originality, man's contact with them has borne fruit, so that all their instincts do not come from nature.—D. M. M., Banff.

AUTUMN FLOWERING PLANTS.

[5698.] Here in Philadelphia my bees have been working and storing honey up to the end of September from what are known as "fall flowers." First there is the golden rod, then comes what is known among bee-keepers as the yellow flower, from which in most seasons a great quantity of honey is obtained. Having collected some seed of the latter to send to England, I wished to obtain the botanical name of it, and with this in view went to the university and saw one of the professors of botany, who very kindly looked it up for me, and compared the flowers I had taken with me with prepared specimens they had, and also referred to a book called "Illustrated Flora of Northern United States, Canada, and the British Possessions," by Nathaniel Lord Button, Phd. He said its proper name was "*Bideus chrysanthemoides.*" The following is the description given me by a Mr. Ludwig, who lives near the place where the flower abounds, and who has this year, he writes me, extracted 4,500 lb.

of honey from eighty colonies, chiefly from this source. A little was obtained from the wild aster, a small kind of Michaelmas daisy, which succeeds the *Bideus*. Mr. Ludwig says:—"The first of the yellow flower appears about the middle of August; the whole field is in full bloom by September 1, when the blossom is at its highest, and is good for honey till the 15th; after that date it does not seem to yield much honey. But while the *Bideus* was most wonderful this year, it failed altogether in 1901. It grows from one to over five feet high; I guess, according to the quality of the soil. It seems to grow best along the sides of streams and ditches, and on low land which is flooded every winter or spring, and wants heavy rains in July and fore-part of August to develop."

The waste land and rough low-lying pasture near the Delaware river and tributary streams are completely covered with this yellow flower. It is a beautiful sight, and many people take a ride in the electric cars, which run through the district, in order to see it. This plant is very hardy, would no doubt thrive well in England, and be a great advantage in many districts where no late honey-flow is obtained, and brood-rearing ceases; here it continues quite late. I had young bees sporting in front of my hives the first week in October. I will send you a few of the seeds, Messrs. Editors, and am sending some to a few friends, but was late in collecting it; but, all well another year, I will get much more.—JOHN M. HOOKER, 4422, Chestnut Street, Philadelphia, U.S.A.

[The small packet of seeds arrived with above, and we will place some of them in good hands for trial in this country. If the plant is found to do even half so well in this country as our friend Mr. Hooker describes, it should prove a valuable addition to our all too scanty sources of late bee-forage.—EDS.]

"BEE-PEST" v. "FOUL BROOD."

[5699.] May I be allowed a few words of reply to your esteemed correspondent, Mr. W. Woodley, who, in his "Notes by the Way," proposes the term "bee-brood pest" instead of "bee-pest"? He asserts that "the *Bacillus alvei* does not affect the bees, but only the brood." In contradiction of this statement, I would refer to what Mr. Cowan says (page 145 of the Guide Book"), viz.: "It was at one time supposed that only the brood or larvæ were attacked by the disease, hence the name 'foul brood.' But Hilbert's investigations in 1875 enabled him to declare it not only a disease of the brood, but that the mature bees — sometimes including the queen — were liable to be affected by it. Thus the disease is sometimes called 'bee-pest.'"

In further corroboration, I may refer to the facts and experiments detailed in Cheshire's book, Vol. II., pp. 546-550. Now, it was in reliance on these two great authorities that I spoke of the term "foul brood" as being *misleading*. To that epithet, then, I stoutly adhere, and still press for "bee-pest" as both *correct and unambiguous*.

I may also just remark that Mr. Woodley seems in some degree to give away his case by what he says about the importation of foreign bees, because, unless I am mistaken, the trade is confined to the importation of foreign queens, without accompanying brood.

I am sorry so experienced a bee-keeper as Mr. Woodley is using his pen against legislation with regard to "bee-pest." What has been effected in the cases of "anthrax" and "rabies" largely disposes of the objections raised on this question, and fully warrants present efforts for minimising, if not extirpating, the bee-keeper's worst scourge. — W. H. HARRIS, Hayes End, Middlesex, November 18.

SIZE OF HONEY JARS.

[5700.] In reply to Mr. George Rose's query (5691, page 454), "Does honey not vary in weight?" I answer "Certainly." But honeys that wise bee-men would put on the market would not vary to the extent of *one-eighth* of their own bulk. When I wrote about a jar to hold "exactly 1 lb.," I meant, of course, of honey of a proper specific gravity, and not of newly-gathered nectar. Honey that required all the space contained in the jars supplied to me, to hold a pound of it, would hardly deserve the name of "honey." If I ever obtained such surplus, I should use it for bee-food, and not to supply the wants of my customers.—W. H., Brilley, Whitney-on-Wye.

"AGRICULTURAL PRODUCE RATES."

[5701.] Referring to the letter of Mr. W. Stacey, Sheffield (5694, page 456), I think he is wrong in saying "there is no limit with regard to distance." I have before me as I write the table of rates for the Midland line. The limit weight is 56 lb. (above that weight being charged a halfpenny per lb.); not exceeding 30 miles, 55 lb., 7d.; up to 50 miles, 1s. 2d.; 100 miles, 1s. 9d.; 200 miles, 2s. 4d.; over 200 miles, 2s. 11d. Goods as above go by passenger train at "owner's risk rate."—J. PEARMAN, Derby, November 19.

(*Correspondence continued on page* 466.)

HOMES OF THE HONEY-BEE.

THE APIARIES OF OUR READERS.

Mr. J. Edwards, whose neat little orchard-apiary is seen below—along with himself and what we take to be his twin-boys—is one of the none too numerous bee-keepers whose first failure only adds to their determination to succeed. How he has managed this will be found in the following "Notes," which need no addition from us. He says:—

"In reply to your request for a few notes of my bee-experience, I became first acquainted with bees and bee-keeping by reading the small work, 'Modern Bee-keeping,' from which I took pattern and measurements of my first frame-hive. I then began reading your valuable journal, in which an illustrated article appeared showing the construction and giving details of the 'W.B.C.' hive. I liked the idea of all parts being separable, so followed the instructions given, and made my second hive. This was in the early months of 1894. In the following May I stocked them both with bees, but owing to a bad season following they yielded no surplus; but, as far as my bee-keeping knowledge at the time allowed me to judge, both stocks went to winter in good condition.

"The following April, on examination, I was disappointed to find one queenless and the other in a weak and dwindling condition. I therefore united both lots in one hive, but as the season advanced they simply died out. Discouraged at such a bad start, my hives were packed away, not knowing then whether I should renew the attempt. It was not till the spring of 1896 that I ventured on a second attempt, when I restocked both hives, and, being more determined this time, I perused and studied carefully the 'Guide Book,' and with the aid of the BEE JOURNAL was able to deal more fully with the requirements necessary to successful bee-keeping, with the result that my surplus of that year well repaid me.

"My further experience led me to construct a hive to take fourteen frames, hanging parallel to the hive entrance, and find for all purposes it suits me best, especially for ease in manipulation, and seven of my nine hives are made of that pattern.

"My apiary borders a thickly-populated district of the city of Norwich, so my honey harvests are not to be compared with those further in the country where the entire surroundings abound with good bee-forage. The hives shown in the picture are all my own make. On my right and left are two young enthusiasts in the craft, who proved very useful in the management of the apiary. Having but limited space at my disposal, part of which is devoted to amateur gardening, the building up of my

MR. J. EDWARDS'S APIARY, SPROWSTON, NORWICH.

apiary has been slow. It has nevertheless been an interesting and instructive hobby. The past season has been an average one, but the colour of my honey exceptionally dark. May the experiences of another season bring success to all bee-keepers."

CORRESPONDENCE.

(*Continued from page* 464.)

BEE NOTES FROM DERBYSHIRE.

THE "RYMER" METHOD.

(*Continued from page* 454.)

[5702.] In continuation of my "Bee Notes" of last week, I add a few lines by way of comparing results of the "Rymer" method, as detailed on page 453, and giving particulars regarding my weakest stock, as promised. The stock in question was headed by a young queen removed from a driven "cast"—or second swarm—and united to about one pound of bees in October, 1903. The small lot of bees were on nine combs, nearly full of heather honey, and they came through the winter safely, but very weak; in fact, so weak that when examined on May 4 I was inclined to unite them to the next lot, but I finally decided to nurse them a bit and watch results. In doing this I used to uncap a comb of honey and put it in centre of brood-nest at regular intervals, and this started the queen breeding so well that the honey all went, and the frames became solid blocks of brood. The bees, too, were so quiet that I could look at them, as I did every day, without using smoke or veil, right up to the time when I put the excluder on for supering. In this way I found out that although the bees will build foundation out in twenty-four hours, the queen will not lay in it till she really needs room for egg-laying. I got six frames of comb worked out in this way, so I kept adding a new sheet of foundation every day till the whole eleven frames were full of eggs and brood. I then put super on, and the bees took possession at once, and had stored honey in it the same day. I could hardly call it honey, but they put about 16 lb. of very dark stuff in it, when we fortunately had some heavy rain in our district, which washed off most of the honeydew from the trees and plants, and I thought some genuine honey would come in, so I took off the super and replaced it with a clean one. In this way I got 28 lb. of good honey. Up to this time, however, I had no thoughts of taking this stock to the moors at all; but a bee-keeping friend chanced to call on me, and while showing him round we had a look at the brood nest of the hive I am writing about, and I could hardly believe my eyes on seeing the whole eleven frames packed with brood as closely as they were for some weeks before I had put the supers on! I thereupon made up my mind to try that stock's luck at the moors, and was glad I did, for it gave me 60 lb. of heather honey in supers, besides finding the brood-combs well supplied for winter; in fact, I do not go beyond the mark in saying there would be close on 40 lb. of honey on the eleven brood frames. I have never had a queen that packs the frames with eggs so solid with brood as this one; she never misses a cell, while some queens will miss a few cells all over every comb. I am thinking of trying my hand at rearing some queens from this one another season. In closing, I may say from my five hives at the moors I got 140 lb. of heather honey this year.—TOM SLEIGHT, Pilsley, Chesterfield.

SOME BEE NOTES FROM SCOTLAND

ON MATTERS OF INTEREST.

[5703.] Many thanks for kindly giving me your opinion as to foul brood in the specimen of comb sent you. I felt little doubt myself that it was only so-called "chilled brood," although, as already said, I have been fortunate enough never to have this bee-pest, to my knowledge, amongst my bees, so that I have had no personal experience of the trouble.

I was much interested in what you said with regard to drone brood not being so susceptible to the disease as that of the workers. I wonder how this is to be accounted for. I am sorry not to have sent some workers' cells, but the latter seem to be in exactly the same condition. I found these sealed cells scattered throughout the greater part of the hive, only two or three being together; in no part was there anything like a mass, and I am at a loss to understand this. If the death of the larvæ results from being "chilled," why should they be scattered in this way through the hive? I should be inclined to think that all the larvæ of a certain comb or combs would be affected in the same way. Then, again, why is it that all the dead larvæ were lapped-over, and seemed to have died just about the time they were turning into the pupa stage? I might also ask: How is it that I did not find dead larvæ of all ages in the comb? Is it that the bees would clear out all those that died unsealed? Although I have kept bees almost continually for over half a century I have not been in close touch with other bee-keepers, so what is perplexing to me may not be to others. The queen of this hive may have been an old one. I caught her at the time of swarming upon the ground—she having a mutilated wing—and put her with the swarm. It was a bought hive, so I do not know her age;

but by the queen cells found on the combs later on this year when I examined it the bees seemed preparing to supersede her. Can it be that the progeny of an old queen are feeble of constitution, and therefore liable to perish at a certain stage of their history as with human beings? Another thing I am interested in: I observed on this same hive several very small ichneumon flies crawling about near the entrance; they were not more than an eighth of an inch or so in length, but very sharp in their movements, as I think most of this family are. Is it possible that they can have any connection with this death of the larvæ? I remember in the days when I was a collector of moths and butterflies I found that it was at a certain stage generally that the ichneumon flies' grubs developed fully and the larvæ died. I shall certainly hope to watch this hive closely next year, and note its history with a fine young queen introduced.

Speaking of young queens, I see the bees of one of my hives, with a "Golden Italian" queen I got from America and introduced last month, is carrying pollen in, so I suspect she is laying. It is the only hive I see doing this out of my twelve.

I am sorry no one of your readers seems to have noticed my question a month or two back with regard to the peculiar habit I notice bees have of passing their two fore-legs over their antennæ just before taking flight. As I said before, this habit seems universal at ordinary times, but I cannot say as to their practice when swarming. I would much like to know what your own thoughts are concerning this, as, although I am a careful reader of the B.B.J., I have seen no notice of this peculiar habit. There are many things I would like to talk over in bee-life, but must not trespass further on your space. All I would add is that I have been interested in the discussion in your pages on the subject of foul brood legislation. I think there is a good deal to be said on both sides. For myself, I should have been sorry indeed to have any one opening my hives during all the early part of this year, not on account of disturbing section-racks or surplus-chambers, but on account of the cold, ungenial weather. Another thing that seems to me important, and which will render the stamping-out of bee-pest almost an impossibility, and a point that does not seem to have been sufficiently noticed—viz., the great number of swarms located in all sorts of inaccessible places. Two swarms of mine went into the roofs of my neighbours' houses One that I believe I saw enter has been there now for four or five years, but to get at it would entail serious work of destruction to the roof. There are other houses in the village that I am told of with swarms in the roof; and I know of two hollow trees in which bees have made their home, one of which is now occupied by them. This summer stray swarms have been going about in all directions. Some years ago, when staying near the forest of Fontainebleau, in France, I noticed the hollow trees were full of bees as well as hornets; in some parts of England I expect it would be much the same. How could these swarms be dealt with? I send name and address for reference, and sign myself—HUMBLE BEE.

[We will be glad to have the personal experience of readers on the various subjects mentioned in the above interesting "Notes" for publication, and, later on, may give our views on such points as have come under our immediate notice.—EDS.]

BEE, FRUIT, AND POULTRY FARMING.

[5704.] Your correspondent, "Constant Reader," in B.B.J. of November 10 (page 446), asks for a rough idea of the required capital to enable him to start a farm of two or three acres in the above line. He also enumerates what he would like to plant his land with—viz., choice sorts of apples, pears, and plums, etc., and between these bush-fruits, currants, gooseberries, rasps, etc. He does not, however, tell us if before planting he would either purchase or secure a lease of the ground, which is a very important factor in the estimate of capital required. I assume, therefore, that he would lease the land, which, if located here in Jersey (where some of the best and choicest fruits grow), would cost him £5 per acre at the lowest price. A neighbour of mine has just gone in for fruit-farming, and paid £300 for one and a half acres, planted with 400 young apple and pear trees. About one-third of his ground is covered with strawberries, and there is a greenhouse 80 ft. long by 12 ft. wide, in which he has grown a fine crop of tomatoes. All his produce he sells wholesale to local fruit shops. He is not a bee-keeper, although located in a suitable place for honey-production, neither does he keep fowls. I have myself ten colonies of bees, and grow choice fruits for home consumption. Should "Constant Reader" require a sample of named fruits, or any further information, I shall be glad to help him if he writes me. As regards the number of colonies of bees our friend should start with in view of honey-production and selling swarms, I should advise him to try a dozen stocks in "W.B.C." hives and twenty in skeps, and if he found that he could still dispose of more honey and bees, and had time at disposal, this number could be increased or reduced according to the requirements

of his case. In lieu of fowls, which is another distinct line of business, and one requiring a lot of time and attention to make a success of it, I should advise "Constant Reader" to get a suitable "jacketed pan" and make a good jam of his fruit whenever he found he had a glut or prices were very low. He would then be able to sell to greater advantage, and dispose of the bottled fruits with profit to much better effect; besides, it is more in line with fruit-growing. Wishing him every success.—W. W. KAY, the Woodbines Apiary, St. Brelades, Jersey, C.I., November 19.

COMB OR EXTRACTED HONEY—WHICH?—III.

By C. P. DADANT.

(*Continued from page* 440.)

I hope the reader may not become tired of my discussion of the above subject; I aim to give all the points in my thoughts in as few words as possible.

In my experience the production of comb honey is more expensive than that of extracted honey—that is, there is more labour required for the same result. Probably many beginners will be astonished at this statement, for surely extracting is a work that is entirely avoided when producing comb honey. But if we are well fixed for either work, I believe that I can show clearly that there is economy of labour in extracting. When you produce comb honey you have a fresh lot of sections to prepare every season. They must be put together, the foundation must be inserted in them before the crop. They must be put on at the right time, neither too early nor too late, for the bees will soil them if they are put on too early, and they will swarm more than ever if they are put on too late.

In order to avoid what is called "travel-stains" on the honey—made by the bees travelling back and forth over the sealed sections—they must be removed as quickly as possible when fully sealed. The practical comb-honey producer watches his bees daily, and is ever ready to take off sections and put on more. He is tied down to his bees. With this care on his hands it is almost impossible for one person to care for more than one or two apiaries if they are large.

When the crop is over the sections must be scraped, sorted, or graded, and put away in shipping-cases.

As there is more swarming than with the production of extracted honey, there is more labour on that score and more watching necessary. With the production of extracted honey, after the first year or two, when you have fully supplied your bees with the needed extracting frames, you have those extracting frames and supers all ready, at the end of the season, for the next crop. At the beginning of the new crop, or a little before, you place the supers on the hives—one, two, three supers to the colony as the case may require. After that only an occasional visit is needed, until the crop is over, to add more supers if any of the hives get crowded. The crop over, you extract all at one time, and two or three days will suffice for an entire apiary of one hundred colonies.

It is true that at this time you need help, but this help does not have to be skilled help, though persons who are accustomed to the work do better than novices. But we have never yet seen the hired man who could not do his share when extracting honey unless he was so afraid of the bees that one sting would drive him away. The lack of adequate help was one of the main reasons for our abandoning the production of comb honey. We had a thousand things to do at that time, and never could spare more than one man till the harvest is over. Too many irons in the fire! But by the help of a large stock of extracting combs we have never needed to let the irons burn while attending to other things.

There is an additional work, however, in the production of the extracted honey, if one wishes to reach the top price, and that is putting it up in small packages. Cans, jars, bottles, pails, and wooden or paper packages help the sale. But the price at which the honey sells when put up in these different retail packages is increased to such an extent that we may well spend our time in preparing it in this way. The intrinsic price of extracted honey is much less than that of comb honey, and that is one of the objections against its production, of which I will speak later. But when we put it up in these small packages we decrease this difference in price, and that, of course, may be credited to the labour which has been employed in putting it up.

The time of honey-sales—October to January—is the least busy of the bee-keeper's year, and he is often glad to increase his income by preparing his crop for retail in this manner. We have never neglected this side of the business of honey-production, and if any of our readers has a surplus of extracted honey which gives him some concern for its disposal at remunerative prices, let him try our method of putting it up in small packages, and drumming it at home among his acquaintances and in the groceries of his neighbourhood. Too many of our apiarists send their honey crops, whether large or small, to the great centres, where they glut the market and are afterwards redistributed among the very same consumers to whom these apiarists might have sold the product in the first place, with much better results.

Another objection which we have to comb-honey production, that does not apply to extracted honey, is the necessity of keeping many combs that are partly filled, from one season to another. In a location where good crops are the rule and poor crops the exception, these combs are always a small percentage of the entire amount. Usually the same sections do not stay over more than one season. But in a secondary location, such as we inhabit, it is sometimes necessary to keep your stock of unfinished combs and sections over two or three years. They then become so stale and shopworn that they are unfit to be used, and must be destroyed. This is an item we do not find in the production of extracted honey. If we put the supers on the hives and they are not filled, we remove them in the fall and put them away again, none the worse for wear, and a little more propolis on the joints. We have here more large cornfields, wheat and oat fields, and timothy meadows than anything else. Large dairies, with their accompanying pastures full of white clover, are the exception. So seasons like the one just past are, with us, rare.

When we produced comb honey we found that we had often a large percentage of our sections that were unsaleable, owing to being too much soiled by long usage. The reader will understand that I insist on the greater need of being in a good location when we want to run for comb honey. California, Colorado, and some parts of the North, where both basswood and clover abound, are the Eldorado of the comb-honey producer. The Californian especially has either much honey or none, and his crop is always sure when he has plenty of rain. So he knows for certain whether to put out a large number of sections for the new crop.—*American Bee Journal.*

Queries and Replies.

[3617.] *A Novice's Queries on Foul Brood.*—Reading about foul brood in your JOURNAL, and having bought some honey that I do not like the taste of, I shall feel obliged if you will kindly answer the following questions:—1. Has the sample of honey enclosed any foul brood in it? 2. Is honey from hives affected with foul brood injurious to people eating same? 3. Is there any way a novice can detect foul brood in extracted honey? I send name for reference, and, thanking you in anticipation, sign — S. X., Buckhurst Hill, November 16.

REPLY.—We print above queries in full for the purpose of showing the views of a beginner with regard to honey from hives affected with foul brood. The replies to questions put are:—1. The sample of honey sent is deteriorated for table use by being largely mixed with honeydew. On the other hand, it is practically impossible to detect honey taken from foul broody hives. 2. While an almost certain means of conveying infection to bees fed on it, honey from diseased hives is perfectly harmless to human beings partaking of it as food. 3. No.

"FORCED SWARMS."

A CANADIAN METHOD OF SWARMING.

If queen-cells are found containing a queen larva it is proof the swarming impulse is far enough advanced to take action. Hives previously prepared for swarms have been distributed about the apiary before starting operations. They each contain, in the order named, two dummies, three frames fitted with "starters," one worker comb, three frames with "starters," and three dummies, twelve in all, in a hive of ten-frame Langstroth capacity. One of these is brought and set down on bottom-board and stand behind the hive to be treated. The operator, who sits at the left of the hive, removes the three dummies from the right or "farmer" side of the new hive, and shoves over the remaining contents so as to have the empty space next him. He now lifts the comb nearest him from the brood-chamber, shakes it almost free of bees, and places it in the new hive next the left wall. The next comb has a double space for shaking off bees in the old hive. It takes its place beside the first comb, and the return motion of the hands carries a dummy from the new hive to the old. Comb No. 3 is shaken, carried to the new hive, and dummy No. 2 is brought back. The fourth comb exchanges places with the first frame with "starters," and so on. When the twelve comb has been shaken in its own hive and transferred to the new, the sixth starter put in its place and the old hive filled out with the three remaining dummies, we put on the supers, close the hive, and the bees have been swarmed.

There is now a swarm hived on "starters" on the old stand under conditions fairly natural, at the convenience of the bee-keeper, without fuss, excitement, or acrobatic feats. Leaving the bees in the old hive is merely a matter of convenience. Unless there is no honey in the supers it is not necessary to wait for the bees to fill themselves with honey before shaking, as they can do that at leisure afterwards. These swarms behave in all respects like natural swarms just hived. If they swarm out next day, so would natural

swarms under like conditions, and the same little devices must be used to make them contented. For example, in comb honey production it may be best to hive on a full set of frames of "starters" (not omitting the comb) for a few days, then contract with dummies. Shade should be given, etc., and always ample ventilation. The empty comb in the middle is useful for various things. If the supers contain sections it catches the pollen which might otherwise go up. If extracting-combs, it keeps the bees from all going up into the supers and deserting the queen.

Loss of Queen.—In extracted-honey production it may be best to guard against this by shaking the bees on a set of full sheets of foundation. I propose to test this matter fully this season. A few minutes after "shaking" swarms sometimes show signs of queenlessness. The queen has been accidentally left with the brood, or, in rare cases, has been lost. In this case we do not bother hunting up the queen, because she will do no harm with the brood, and if lost she cannot be found. In fact, we hunt queens, except in rare cases, but once a year—viz., at the clipping season. Give this queenless swarm a young queen, a queen-cell, or a comb of unsealed brood and eggs. If the latter is given, all but the best queen-cell must be destroyed at next visit.

The "parent stock," as we call the hive of brood, sits directly behind the swarm, and has enough bees to care for the brood and the best queen-cells which have been saved unshaken. It is given an extracting super at once, and removed to a new stand at the next weekly visit. To save time these parent stocks might be given laying queens, or, on the other hand, the brood might be shaken clean of bees and used for building up weak colonies.

For comb-honey production I know of only one better system than the one just described—that is, to allow the bees to swarm naturally. No stocks work in sections with the same vigour as natural swarms. This system is the nearest approach to natural swarming, and is, all considered, sufficiently cheaper to make it more profitable. In producing extracted honey, I think that the twelve-frame Langstroth brood-chamber and super capacity of twenty-four frames, with one large entrance and upward ventilation from June 1 on, will reduce swarming to a minimum which may be almost disregarded.

On examining later stocks which have been shaken on "starters" without any comb, I found in some cases the queen gone. She had been worried to death by the bees, who could not see why she did not go up into the super with the rest of them.—*Journal of the Department of Agriculture of Western Australia.*

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

EXPECTANCY (Cheshire). — Candy-Making. —Your sample of candy is quite unfit for use as bee-food, being as hard as stone through over-boiling. When properly made from "Guide-Book" recipe the candy is found quite soft and buttery when scraped with the finger-nail. We need only say that numerous readers have sent excellent samples of candy made from the same recipe in order to show that you have failed somewhere in carrying out the directions carefully.

E. P. BETTS (Cambridge). — The Late-Flowering Lime (*Lilia petiolaris*).—We believe Messrs. Dickson's, Limited, of Chester, can supply young trees of this variety of lime, as also do Messrs. Veitch and Sons, Limited, Chelsea.

W. H. JAMES (Nailsworth) and Others.—Free Seeds of Chapman Honey-Plant.—We have received a further supply of seeds, kindly sent by Mr. D. H. Durrant, for free distribution, but we require a stamped addressed envelope sent in which to forward same to applicant. Nor can we supply cultural directions for growing the plants, not having such by us. It may, however, be said that the seed should be dealt with as any ordinary tall-growing annual by sowing in spring, and thinning out to allow as much room for each plant as can well be spared.

MANXMAN (Croulsbourne, I.O.M.).—Wax Sample.—If this is your first attempt at wax-extracting "from old combs," the result is very good indeed. It is, of course, not light enough in colour for super foundation, but quite suitable for brood-combs.

J. S. (Bristol).—"Editing" Contributions. —1. While always glad to do our best in revising, where necessary, all contributions for print with which we are favoured, as an indispensable item of editorial labours, our correspondent may safely take it from us that we do nothing in this way from love of the task, having quite occupation enough without adding unnecessary work. On the other hand, when our efforts in this direction are unappreciated and we are called to account for not printing "copy" exactly as written, we may be pardoned for saying that such communications as that referred to would be not only "revised," but "boiled down"—as the phrase goes—by any editor worth his salt.

Editorial, Notices, &c.

SUBSCRIPTIONS FOR 1905.

Readers who propose having their B.B.J. for the coming year supplied direct from the office by post, will assist our publishing arrangements very much by dating their subscriptions from the beginning of the year. An order form is printed on page iii. of this issue, to which attention is respectfully invited, and as names, &c., are printed, the form should be carefully filled up with correct postal address to ensure prompt delivery on Thursday morning.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "*THE EDITORS *of the 'British Bee Journal,' 10, Buckingham-street, Strand, London, W.C." All business communications relating to advertisements, &c., must be addressed to "*THE MANAGER, *'British Bee Journal' Office, 10, Buckingham-street, Strand, London, W.C."*

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[5705.] The month of December is with us, and, being frost-bound for a full week past, there is but little to say on the work of the apiary. If snow blocks the entrances of the hives it will do no harm unless it melts in the sun and freezes afterwards, in which case the doorways may be stopped up entirely, hence it is best to brush snow off roofs and alighting-boards when it begins to melt. Also see that roofs are watertight, or the melting snow will get inside and make the cushions and wraps wet, to the discomfort and injury of the bees. All colonies should now be safely packed; but if this has not been done, no time should be lost in attending to them, with as little disturbance to the bees as possible, as soon as the weather breaks. Simply giving a cake of candy will cause no disturbance, nor will pushing a strip of wood by way of feed-hole in centre of quilt crosswise to top bars in both directions, far enough to give the bees winter passages. This done, place the cake of candy over the feed-hole, and carefully wrap up for the next two months, provided there is a sufficiency of food in the brood-combs for winter stores; otherwise, cakes of candy must be renewed as often as needed.

I was very glad to read Mr. J. M. Hooker's interesting letter in B.B.J. of last week. I notice our old friend is still interested in bees and bee-plants. May his Christmastide be a joyous one!

I am obliged to Mr. W. H. Harris for referring, on page 464, to "authorities." The theories advanced are, however, in a nebulous state at present; and when we come down to hard, proven facts, we shall then know if the *Bacillus alvei* is the cause or the sequence of foul brood, for I read in the *Morning Leader* of November 26 of a dispute between two great scientists (Professors Koch and Emmerich) on the subject of bacilli. But to return to the bees, I say, if adult bees are infested or impregnated with *Bacillus alvei* now, can the simple method of shaking bees off brood-combs into a new hive, and starting them as a swarm, cure the colony of foul brood, as we know on the best authority has been done in hundreds of cases? This tends clearly to show the immunity of adult bees to the *bee-pest*, so that, in my opinion, the term "foul brood," though possibly a less pleasing term, and "bee-pest" more euphemistic, yet the former is the more correct rendering; but if the term *foul brood* is in any way disadvantageous or misleading to the public, who use honey as food, by all means tone the matter down and call it "bee-pest." Referring to the importation of foreign queens and bees, I think Mr. Harris will admit that both queens and swarms are sold by importers and exporters of foreign bees. Besides, I only mention these as a *possible* source of infection, seeing that some purchasers of foreign queens have had reason to blame the latter for foul brood breaking out in their apiaries shortly afterwards. As regards *anthrax* and *rabies*, we cannot isolate bees, nor muzzle them. The power to destroy may help to extirpate foul brood, as the yearly holocaust by the brimstone match of our grandfathers' time kept it so well in check that very little was heard or known of the disease until modern methods of bee-management came into general use.

Honey Jars.—Several of your advertisers stock the No. 9 honey-jars, with the *triangle brand*. These jars are of good quality, having well-fitting hard metal caps, and hold 1 lb. honey (or 15 oz. to 15½ oz. if only filled just to the shoulder). The firm had a special mould made for the manufacture of the 16-oz. jar (their No. 6 holds 17 oz. to 17½ oz. of honey). If a tie-over jar is required the triangle brand No. 66 will meet all requirements. It holds 16 oz. when full, or 15 oz. to 15½ oz. up to the neck. The ½-lb. (667) tie-over jar is still too large; I have filled

half a gross this week, and given about 2 lb. of honey in over-weight to fill the jars to the neck. This is how bee-keepers have to pay for appearances. — W. Woodley, Beedon, Newbury.

"LAW" *V.* FOUL BROOD AMONG BEES.

[5706.] The frequent and regular contributions from the pen of our esteemed friend Mr. Wm. Woodley which appear in your pages lead to the conclusion that he is a "law-abiding citizen," and yet in his "Notes" (5687, page 452) he doubts the efficacy of the law in regard to bee-keeping. After mentioning a few cases by which the disease of foul brood is spread, he says: "These are only a few of the many ways which present themselves when one thinks of the spread of foul brood within recent years." He might have added: "Which the law would attempt to prevent if a Foul Brood Bill was passed." Many people are scared at the word "law," and regard it as interfering with the rights of individuals. I do not share that view. To illustrate my meaning, whilst I was in London on a visit to the "Dairy Show," as I crossed the Strand amid the enormous traffic in the roadway, a policeman (a law officer) simply held up his hand, and a score or two vehicles immediately stopped in order to allow a similar number to pass on in another direction. This was a temporary interference of the traffic, but it worked advantageously for all; and if Mr. Woodley had seen the effect as I did, he would admit that the law officer was necessary for the London public. Thus we who are bee-keepers should possess insight enough to see that a similar policy exists amongst our bees; and it will stand quoting once more—viz., "The welfare of the whole is the consideration of each individual."

I am at certain seasons sent on tour by the Devon Council, and carry with me instructions to act as a "missionary." I call upon a bee-keeper, and on making myself known am well received, and asked many questions, which I answer to the best of my ability. Soon afterwards the bee-keeper conducts me to the garden where the hives stand. A glance at the front of the hives enables me to see that several are very active and bringing in honey, but one or two are weak, and working languidly. The owner informs me he has surplus-chambers on the strong ones, and the bees are working in them. With his permission I raise the roof of a strong lot, and find bees are drawing out foundation in the sections. I close the hive and pass by the strong lots, being satisfied by what is seen in the one examined that the others are also doing well. We then talk about the weak hives. I learn that they are not supered because of being weak in bees. On opening one my suspicions are aroused, and on carefully lifting a frame find the stock is diseased. I inform the owner of the fact, and, taking a "Leaflet No. 32" on foul brood from my satchel, ask him to compare the illustration of the leaflet with the comb, then point out the difference between healthy and unhealthy brood, and advise him, for the sake of his healthy hives, to make short work of the diseased stock by burning the lot. Three months after I call again, and find that the advice has not been acted upon; the bees in the diseased hive had died out, and the hive is banished to an obscure part of the garden, where his own bees or those of his neighbours have free access to the contents of the hive.

Now, this man is supposed to be under the law, but he has a law unto himself which safeguards him in this case. But the whole mass of evidence is against him, the expert's report, the facts borne out by the leaflet, the fact of healthy hives being profitable whilst those diseased are not, yet the indolence or indifference of this man can inflict great loss and damage not only to himself but to his neighbours! Mr. Woodley has only to think about these things which I have tried to describe from what I have seen with my own eyes, and he will soon have less than a hundred stocks of bees to engage his attention. In conclusion may I say that his bees should teach him the value of the two lines at the head of "D. M. M.'s" article last week:—

> "Creatures that by a *law* in Nature teach
> The art of order to a peopled kingdom.'

—John Brown, Polyphant, Launceston, Cornwall, November 28.

DO BEES SLEEP?

PICTURE POST-CARDS FOR BEE-KEEPERS.

[5707.] For some time past I have been trying to find out if bees sleep at night, or if their lifetime is spent like that of the goldfish—"constantly on the move" when in health. I have peeped into hives without disturbance, but I never found the bees napping. The nearest to it is when they fill themselves with honey and cluster together for wax-secreting purposes, and even then they cannot be entirely at rest, because wax-secreting involves work. There is also the well-known constant hum heard day and night. Again, if a swarm, on being hived, is supplied with foundation at night, it will be found partly drawn out the following morning, thus proving that the bees have been at work all night through. Yet the workers like a rest, for they can be seen

resting on the flight-board for from five to fifty seconds when they come home heavy laden after a long flight from the forage-ground. I have also noticed that if bees alight near the entrance, where they get the warm air from the hive, the resting-time is not so long as when a bee is blown to the ground, or if from any cause it alights some distance away from the hive. I also notice that the resting-time is shortest on warm days. It would be interesting to know if any reader has had experience in the same direction. I also wonder if it is the cold weather that has prevented dealers from taking up the idea suggested by "D. M. M." (on page 425) of picture post-cards on bee subjects. May I suggest that bee-keepers be asked through the B.B.J. to say if they are willing to order a quantity (more or less), and thus induce our Editors to publish a series this year if the response is sufficiently favourable? I send name and sign—H. P., Brompton, Kent.

BEE NOTES FROM GLAMORGAN.

[5708.] I beg to send you a brief note of the past honey season in South Wales. The main source of honey in our part of Glamorganshire is white clover, which this year has been conspicuous by its absence. The early part of the year was very fine from a bee-keeper's point of view, honey coming in plentifully from fruit trees, hawthorn, and also a quantity from the charlock, or wild mustard, there being one field near at hand practically full of it. This happy condition of things brought the imagination into play, and bee-keepers, in our mind's eye, pictured supers galore all full, honey ripener full, extractor full, and, finally, full pockets. Then there came a decided "slump," with nothing gathered, until the blackberry bloom came in, when the bees managed to store a little more. Taking the season on the whole, however, it was very fair, my total return being 180 lb. of honey from four hives, and one accidental swarm. Thanking your pithy little paper for the many hints I have received therefrom—HARRY HUNKIN, Caerhysddu, Neath, November 22.

THE SEASON IN MID-OXON.

[5709.] Thinking a few lines from this district may be of some interest, I send my record for the past season. I had the misfortune to lose four stocks in the early spring from queenlessness, but the six remaining stocks in frame-hives which survived yielded me an average of 55 lb. per colony, which is the highest average I ever had; but the honey was a bit dark in colour. I only had one swarm this year, and the bees decamped, notwithstanding the fact that they were at work on shallow-frames, and had stored quite 20 lb. of surplus in the frames. This stock gave me 30 lb. surplus after all. I work mostly for sections. The chief sources of our honey flow are charlock and white clover. The charlock makes most of my honey granulate in about three days after extracting, and it is no uncommon thing for me to find sections granulated prefectly solid by the time they have been off the hive five or six weeks.

Referring to Mr. Pearman's letter (5701) respecting owner's risk rate, may I say the Great Western Railway will take packages not over 1 lb. (at owner's risk) any distance for 6d.; 24 lb. will go 200 miles for 1s. 3d. by passenger train; larger packages sent by goods train will go at about half the rate. Trusting all bee-keepers will have a good season in the coming year—D. J. HEMMING, Church Mill, Standlake.

"AGRICULTURAL PRODUCE" RATES.

[5710.] After reading the letter of Mr. Elkins (5683, page 445), I fear he might be unintentionally misled on the above. I should, therefore, like to give a few particulars for his benefit, copied from the figures compiled for use at the Railway Clearing House, as follows:—"Agricultural produce can be sent at 'owner's risk' at the following rates: 24 lb., up to 50 miles, 6d.; up to 100 miles, 9d.; up to 200 miles, 1s.; above 200 miles, 1s. 3d. Above 24 lb. are charged, up to 50 miles, $\frac{1}{4}$d. per lb. extra; up to 100 miles, $\frac{3}{8}$d. per lb.; up to 200 miles, $\frac{1}{2}$d. per lb.; above 200 miles, $\frac{5}{8}$d. per lb. There is no limit as to weight of package by 'passenger train,' on these terms, which apply to all the chief railways in the United Kingdom."—C. W. DYER, Compton, Berks.

THE BUSY BEE.

The season has arrived when the busy buzzing bees are supposed to have retired from the outer world and gone indoors for the winter. But this exceptional year sees them, even in mid-November, very much in evidence. This morning, while the sun shone, the music of the bees went with me along the road, for they had called in large numbers to visit some walls crowned with the strong-scented blossoms of the ivy, and there they were having a rare time in gathering the last of the summer's harvest. They appeared as happy as on a May morning, and they were quite friendly and good-tempered. They did not at all object to my securing some of the best of the flowers to take home with me, and they were quite too busy to waste time and strength in stinging the hand

that intruded among them. It was pleasant to see and hear them; they make a good deal of the joyousness and pleasure of spring and summer, and I was glad they were still out and enjoying themselves, although the heather has faded on the hills and few flowers are left.

I have lately been reading "The Life of the Bee," by Maurice Maeterlinck, and recommend my friends to read it also. (The publisher is George Allen.) Even in fog time it will take us back to he spring, and into the country. It will remind us of the sounds in the woods where primroses grow, and of the wild roses in the hedges; for it describes the hive when it awakes, and the bees duly start on their labours, on to their great episodes in their natural order—the departure of the swarm, the foundations of the new city, the birth, combat, and flight of the young queens, the massacre of the males, and the sleep of winter. I knew a little about bees in my childhood, because my father kept them and loved them. I remember one winter's day when the hive was shut up, and he had to feed the bees, that he told me some people believed that the little creatures could understand what was said to them. A man in our village, who was a bee-keeper, had died, and my father said he would tell them about him. So he tapped the hive gently and said in a low voice, "William Clare is dead," and I heard a moaning, mourning sound from the bees which impressed me greatly. I did not know whether to be relieved or disappointed when my father laughed and said he thought they would have made the same sad noise if he had told them that it was Christmas Day, or the bells were ringing for somebody's wedding. But though I knew a little about bees through having them under my own childish observation, I never dreamed of all the interesting things which had been discovered about them, even before Huber and down to Maeterlinck. No one can know a little of this wonderful community without being interested, but no trustworthy book on bees can fail to deepen our delight in them.

Curious things are told us about the laws of the hive and the habits of the bees, of the things they seek after and the work they do, of the joys and sufferings that enter into their lives. They are not affected by overcrowding—except pleasantly. "The bee is, above all, and even to a greater extent than the ant, a creature of the crowd. She can only live in the midst of a multitude. When she leaves the hive, which is so densely packed that she has to force her way with blows of her head through the living walls that enclose her, she departs from her element. She will dive for an instant into flower-filled space, as the swimmer will dive into the sea that is filled with pearls, but under pain of death it behoves her, at regular intervals, to return and breathe the crowd, as the swimmer must return and breathe the air. Isolate her, and however abundant the food, or favourable the temperature, she will expire in a few days, not of hunger or cold, but of loneliness."

Interesting things are told, too, of "the spirit of the hive," and of the swarm, when, out of the eighty or ninety thousand bees that form the whole population, sixty or seventy thousand "will abandon the maternal city at the prescribed hour. They will not leave at a moment of despair, or desert with sudden and wise resolve a home laid waste by famine, disease, or war. No; the exile has long been planned, and the favourable hour patiently awaited. Were the hive poor, had it suffered from pillage or storm, had misfortune befallen the royal family, the bees would not forsake it. They leave it only when it has attained the apogee of its prosperity: at a time when, after the arduous labours of the spring, the immense palace of wax has its hundred and twenty thousand well-arranged cells overflowing with real honey."

The romance of the queen bee is, of course, retold in the book, and a description given of the respect and tenderness in which she is held. "Should the least accident befall her the news will spread quickly from group to group, and the whole population will rush to and fro in loud lamentation. . . . Her loss once known, after two or three hours perhaps—for the city is vast—work will cease in almost every direction. The young will no longer be cared for; part of the inhabitants will wander in every direction seeking their mother, in quest of whom others will sally forth from the hive; the workers engaged in constructing the comb will fall asunder and scatter, the foragers no longer will visit the flowers, the guard at the entrance will abandon their post, and foreign marauders, all the parasites of honey for ever on the watch for opportunities of plunder, will freely enter, and leave without any one giving a thought to the defence of the treasure that has been so laboriously amassed. And poverty, little by little, will steal into the city, the population will dwindle, and the wretched inhabitants soon will perish of distress and despair, though every flower of summer burst into bloom before them."

But all may not yet be known that there is to know about the bees, and I keep my faith that for everything which God has made there is more pleasure than pain. In any case, the life of the bee is a merry if a short one. To live in the sun, to love the flowers, to fill the beautiful air with music, and to minister to the enjoyment

(Continued on page 476.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

In our friend Mr. Hold, who, along with his good wife, is seen in our bee-garden picture this week, we have another bee-keeping joiner, who, of course, makes all his own hives on winter nights. The following interesting "notes" need no addition from us beyond congratulating him on the possession of a wife who, if afraid of the bees, is not afraid of the "work" among them which is so helpful to the bee-man. He says:—

"In response to request for a few 'notes' to go with photo of my apiary, I fear my experiences among the bees will not possess much interest for your readers, but, such as they are, I send them on. I was first induced to think of making a start in bee-keeping through reading some notes on the subject in *Farm Field and Fireside*, and on Mr. J. O. Beuttler—then headmaster of West Somerset County School and a bee enthusiast—hearing of my wish, he kindly furnished me with a three-frame nucleus hive, with hybrid Italian queen. I have some bees in my apiary still continuing to show the yellow bands introduced by that queen about ten years since. I have always borne in mind the wise saying among bee-men, 'Make haste slowly,' and in observing this rule have not yet reached twenty stocks, but hope to do so some day. I have also to thank a well-known bee-keeper of Wellington, Mr. J. Hookway, for advice and practical assistance in my early days. Being what is commonly called a 'hedge-row joiner,' *i.e.*, an estate carpenter, I make all my own hives, section-racks, and shallow-frame boxes during spare time in winter nights, and endeavour, as far as possible, to get things in order for the following summer. Nearly all hives seen in photo take the standard frame, and are of the same outside dimensions, so that all lifts and roofs are interchangeable with one another. This is very advantageous, because I find in supering that weak stocks require less super-room than strong ones, and it saves having to provide a lot of extra lifts.

"If not out of place, I should like to say a word about the foul-brood question. I think if some of those who object to compulsory power being given had seen some of the ways in which the disease is spread they would be converted. In going about on the estate on which I am employed, if I see there are bee-hives about it makes me curious to know how the bee-keepers get on, and in this way I have come across empty hives belonging to persons who certainly ought to know better, because of being perfectly aware of the character of foul brood. Yet these people, having lost their own bees, have actually cut out the foul-brood combs from their hives and thrown them in a heap on the ground, to be visited by all the bees in the neighbourhood. Others, again, with old rotten skeps, in which bees have died, let them remain on their stands, year in, year out, at times to become tenanted with stray

MR J. G. HOLD'S APIARY, LANGFORD BUDVILLE, WELLINGTON, SOM.

swarms, only to die out again of the same disease. Moreover, if told about it, they simply reply, 'Well, somebody else's bees gave it to mine,' and there the matter ends, as far as they are concerned.

"The nearest of the two figures seen in the picture is yours truly, and in the background—because rather afraid of the bees—is our saleswoman and Chancellor of the Exchequer. She also does all the bottling, packing, and extracting, and is thus a true helper with the work, but somehow she cannot summon up courage enough to hive a swarm or go within half-a-dozen yards of the hives. The hives stand in a corner of an orchard facing south-east at back of house, and are protected from north winds by a high hedge, which latter I find very necessary, as we stand on a knoll exposed to all the winds that blow.

"I cannot record any great 'takes' of honey, because unless we get a fair amount of rain at the end of June, the ground, being of a gravelly nature, rapidly dries up, and with it the clover plant. Most of the honey we get is from the limes, of which there are about two hundred within a mile. This year, however, the blossom was blighted and there was some honeydew about which spoiled about half the season's output. I work mostly for extracted honey, and the main portion of the crop goes to the North of England. I find it increasingly difficult to sell out year by year, but still manage to get rid of it all before the new honey comes in, which is something to be thankful for. I am happy to say I seldom find any trace of disease in my stocks (only two cases in four years). When I do detect an outbreak I generally get the bees off combs and hive in a clean hive on starters, and feed with syrup medicated with naphthol beta. By this treatment, I have never had the disease break out in the same lot again. The combs I burn, and scorch the inside of hive with a painter's spirit-lamp, or else paint insides all over with benzoline and set it alight and burn itself out, then wash out with carbolic soap and boiling water. After this I give the outside a coat of paint and it is ready for use again. I change all my bees into clean hives every year, having previously brushed a solution of Izal all over the inside and put the bees into them while still wet, and so far as I can see, no harm has come from it. I conclude by wishing all bee-keepers a more successful season in 1905."

("*The Busy Bee*" *continued from page* 474.)

of man makes their little lives more worth living than they know. And they will teach all generations yet to come to "improve the shining hour."—MARIANNE FARNINGHAM, in the *Christian World.*

ARBOR DAY.

A RURAL CELEBRATION.

The sylvan charms of the quaint and picturesque little village of Eynsford, in Kent, were quite obscured by frost and fog when the promoters of a recent ceremonial particularly desired that that peaceful hamlet should appear at its best in the eyes of the visitors who travelled from town to participate in the proceedings which have for some years past been associated with the local celebration of Arbor Day. But, fog and frost notwithstanding, the work which the villagers, and more especially their children, had undertaken to do was successfully accomplished. For seven years now Arbor Day has been an event which the adults and children of Eynsford have alike come to regard as a pleasant interlude in their rather uneventful lives. The idea of setting apart one day in the year for tree-planting, and thus indirectly aiding in the commendable project of promoting afforestation in lands where trees are all too scarce or altogether non-existent, originated with one John Stirling Morton, a settler in Nebraska, in 1872. It was through his influence that a State decree was obtained for the observance of one day in the year for tree-planting in that remote part of the world. It was obviously a project in which it was desirable to obtain the co-operation of children as well as that of their seniors, and, shrewd, far-seeing man that he was, he set about with success to secure that youthful aid. Twenty years ago Sir John Cockburn, the popular Agent-General for South Australia, inaugurated a similar undertaking in the treeless town in that Colony of which he was then Mayor at the age of 27. Since then, whenever the opportunity has presented itself, he has strenuously advocated the introduction of this pleasant and useful method of inculcating in the minds of the young the wisdom of covering the landscape with trees. It is, however, to Mr. E. D. Till, of The Priory, in that village, that Eynsford is indebted for the initiation of the movement of Arbor Day in that delightful region of Kent. Operations were commenced in the year of the Diamond Jubilee, when shade trees surrounding the village school and an orchard of cider apple trees were planted by Sir G. Birdwood and Mr. Radcliffe Cooke, then M.P. for Hereford. Shade trees were also planted in the centre of the village, to commemorate the successful defence of Kimberley, Ladysmith, and Mafeking. Afterwards a row of shade trees was planted, in acrostic form, on the western side of the main road, in memory of the late Queen Victoria.

On the western side of the main road leading from Eynsford Station to the vil-

lage the land is owned by Sir W. Hart-Dyke, M.P., and on this the right hon. gentleman readily allowed the tree-planters to carry out their purpose of planting some more trees. Sir John Cockburn, Lady Cockburn, and Mr. Till each planted a tree, and the efforts in this direction of the village children were supplemented by a band of young lady students from Swanley Horticultural College. A short service in the Parish Church, at which the vicar, the Rev. C. H. Simpkinson, preached a sermon dealing with the nature and significance of the occasion, preceded the open-air ceremony, and after it Mr. Till entertained a numerous body of guests at luncheon at the Eynsford Castle Hotel. Advantage was also taken of the occasion to hold a meeting in the schoolroom (at which Sir John Cockburn presided), to impress upon the villagers the utility and educational value of the arbor custom in relation to the question of afforestation. Mr. Dunstan, the Principal of Wye Agricultural College, moved a resolution supporting the institution of Arbor Day. Mr. Dunstan intimated that Wye intended to copy the example of Eynsford in having an Arbor Day. The resolution, supported by Mr. Percy Waterer and Mr. Connell, the latter a tree and fruit grower on an extensive scale, met with ready acceptance.

AMERICAN METHODS.

Cleaning Unfinished Sections.—On page 707 of *American Bee Journal* is an editorial advising bee-keepers to get their unfinished sections cleaned out by the bees in the fall. This is good advice, and should have been given a month earlier. I had all of mine (more than 2,000) cleaned by October 20. The method of procedure advised in the editorial referred to, is too wasteful in practice for me, and I am sure it is for any bee-keeper who has some colonies in his apiary that need to be fed for winter. What apiary of any magnitude is there that has not some colonies with insufficient stores? I have described my method in the *American Bee Journal* once or twice, and will outline it again. I first fill a super with unfinished sections after uncapping all that have any sealed honey, then I spread a piece of burlap over the brood-frames so as to cover all but about 2 in. at the front end of the hive; then set the super on the hive and cover it up tight.

Do this work near the close of day. If the covers are not tight, and if you try to do the work at midday, you may be sorry. I have not had any robbing.

Miss Wilson, Mr. Hasty, and Mr. Baldwin have written in a way to indicate that they did not have success in trying to get sections cleaned in the fall by the above method. I confess that I do not see why, if they began early enough. I have had success with the method for several years.

Excluder-Zinc and Comb-Honey. — In some late issues of the *American Bee Journal* I have noticed that C. P. Dadant has been questioned a good deal as to the reasons why he does not have to use excluder-zinc when producing comb-honey. The reason is not far to seek. He uses brood-combs so large, and so many of them in a hive, that the queen has room to deposit in the brood-chamber all the eggs she is capable of laying. I have used some of the Dadant hives (which, as is well known, take ten Quinby frames) for ten or twelve years in the production of extracted honey, and I have never had to use queen-excluders on them, while I have always had to use them on the eight and ten frame Langstroth hives.

For the minimum of labour and the maximum of results in surplus honey (given the right kind of queens), I believe the Dadant hive to be unsurpassed. If I were running out-yards for extracted honey, I would want nothing better, as I could feel all the time pretty sure that I would not lose swarms enough to hurt if no one was present in swarming-time, and that my presence in the yard would not be needed many times in a season.

Super Capacity.—I notice that Mr. Doolittle does not regard kindly a hive that for extracted honey does not take a super of the same capacity as the brood-chamber. Of course, a super as large as the brood-chamber would be out of the question when the Dadant hive is used for a brood-chamber. If Mr. Doolittle were producing extracted honey, and desired to reduce swarming to almost nothing, and wanted to avoid the use of excluders, and also wished to make his visits to the apiary infrequent, I will venture the opinion that he would adopt a hive of the size of the Dadant, and that on these hives he would use supers taking frames about 6 in. deep.

I know something of the advantages and disadvantages of full-depth supers on the eight and ten frame Langstroth hives, but the labour required for the production of honey in these hives is away beyond what is required in its production by the Dadant method. I know that some bee-keepers use the Langstroth hives and full-depth supers, and allow the queens to roam at will through all of the storeys throughout the season.

These are a class by themselves, to whom I have nothing to say. My remarks are intended for those whose aim it is to keep the queens out of the supers. My experience goes to prove that this result

can sufficiently well be accomplished by the use of the Dadant hive as a brood-chamber.

Those who are averse to the use of bee-zinc, and yet would not like to have brood in the extracting-combs, will, I am sure, be pleased with the results of using these hives.

At time of writing (October 29) I have just finished requeening the colonies that did not swarm and did not do good work in the supers. — EDWIN BEVINS, in *American Bee Journal*.

Queries and Replies.

[3618.] *Late and Early Flowering Lime Trees.*—I notice in your issue of November 3 a paragraph in "Reviews of Foreign Journals" headed "Bee-keeping in Siberia," wherein it states that "Lime-trees are the principal source of honey, and there are seventeen different kinds, which blossom at different periods." Could "Nemo" or any other of your readers kindly give us a list of these limes, with approximate flowering seasons, and state if they will all, or a majority of them, suit English soil?—(REV.) H. R. N. ELLISON, Ashford, Kent, November 18.

P.S.—Is there not sufficient keenness and energy to resuscitate the County B.K.A. in Kent?

REPLY. — Apart from the question of naming the seventeen varieties of limes included in the bee-forage of Siberia, we may mention a late-flowering variety of that tree, concerning which a lengthy and interesting correspondence appeared in our pages a few years ago. The variety referred to flowers in the autumn several weeks later than the ordinary lime known in this country. It is named the *Tilia petiolaris*, and we reproduce below a fine tone-block illustration of it from a photo taken at the time by a reader, which appeared in B.B.J. of October 12, 1899. As a result of the correspondence above referred to, many trees of this lime have been planted in this country. Replying to your postscript *re* the Kent County B.K.A., we have received several similar communications expressing regret at the Association's present moribund condition. It appears that the difficulty in the way of resuscitation arises from the lack of an energetic bee-keeper willing to undertake the secretaryship. Can our reverend correspondent suggest one?

THE LATE-FLOWERING LIME.
(*Tilia petiolaris.*)

[3619.] *Giving Candy to Well-Stored Stocks.*—On October 15 I gave to each of my three stocks a 2-lb. cake of candy, each hive having at the time nine frames well filled with sealed honey. On the 30th I looked to see how they were, not expecting to find much of the candy gone, but to my surprise it was nearly finished, and the bees had not touched their own stores at all; and so I ask: 1. Can you give me a reason for this? I have since given to each hive 5 lb. of good candy. I was much interested during

the warm weather in watching the progress that the new "Golden Italian" queen has made. Since the middle of July she has filled her own hive, and I find a large number have colonised themselves in the other hives. 2. Is this usual? These bees are, to my mind, exceedingly quiet, and they are perfect beauties in appearance.—G. H. BENTLEY, Bowes Park, London.

REPLY.—1. We can give no reason why bees will sometimes practically live on the candy given (if of good quality) while they have plenty of food in store, except it be that they treat the candy as unsealed food, all of which is consumed before broaching the sealed cells of honey. There is, however, no need to give any food to stocks with nine frames of sealed stores on hand. 2. Yes; it is quite common to find yellow-banded bees in most hives where there is a strong stock of Italians near by.

[3620.] *Liability of Railway Companies Under Owner's Risk Rates.*—1. Have I any redress against loss incurred through damage to sections conveyed by rail from here to London at "owner's risk"? 2. Does "owner's risk" relieve the company of seeing that due care is used by their servants? 3. Is there any legal definition as to what is meant by "owner's risk"?—H. NEWMAN, Brent Pelham, Buntingford, Herts.

REPLY.—1. We rather think there is no chance of compensation for damage to goods carried at "owner's risk" rate. In fact, the wording used frees the company from liability. 2. The company would no doubt shelter themselves by the printed conditions under which goods are carried, and it would be difficult to get away from these conditions, seeing that no servant of the company would damage goods through sheer mischief or stupidity. 3. None that we are aware of.

PRESS CUTTINGS.

To the Editor of the *Standard*.

A RECORD FROST FOR NOVEMBER.

SIR,—The frost of last week was so intense for November, beating all records for that month for at least seventeen years, which is as far as my observations go back, that I venture to send you a few details. My thermometers are placed by day on a north wall 5 ft. from the ground, and at night on a wall exposed to the sky 8 ft. above the ground. When there is snow on the ground, as there was here, there is little, if any, difference between an instrument on the grass and one in the air. On Thursday morning last, the 24th, both thermometers at half-past seven registered 6 deg.—i.e., 6 deg. above zero and 26 deg. below the freezing point. This frost beat all previous records for November in the seventeen years specified. For the week November 20 to 26 the following were the extremes:—

	Min. Deg.	Max. Deg.
Nov. 20	27	43
Nov. 21	23	39
Nov. 22	24	36
Nov. 23	19	34
Nov. 24	6	32
Nov. 25	20	34
Nov. 26	16	32

The mean temperature for this cold week works out at 27.5 deg., 4.5 deg. below freezing point; the average night temperature comes 19.2 deg., and the average day temperature to 35.7 deg. Skating was indulged in on a large and deep pool on the 25th, and on the 26th I skated on the deep water of a stream where in places the depth was 10 ft. Such a thing has never been known here in November before. This morning (Sunday) the minimum was 10 deg., and up to the time of writing (five p.m.) the maximum attained has been no higher than 30 deg.—I am, Sir, your obedient servant, R. P. DANSEY, Ludlow, November 27.

HONEY AS A NATIONAL DIET.

For some weeks the *Lancet* has published some very interesting articles by Dr. Harry Campbell, M.D., on the evolution of our food, and it is to be hoped that these will reappear in book form, for they are popularly written, and lend themselves to profuse illustration. The study of ethnology from the gastronomic standpoint is attractive, and the author has made the most of it. Honey is among the eatables treated of in this week's article, and Dr. Campbell shows that it is a favourite food with almost all nations, white, black, brown, and yellow, except the Esquimaux and Fuegians. These two races, which live nearest to the Poles, and consequently beyond the pale of polite vegetables, are so peculiarly situated that they depend for their salads on the stomachs of such herbivorous animals as they kill. Thus, the Esquimaux regards the paunch of a reindeer as a great delicacy, for in it he may expect to find a dish of half-digested mosses and other vegetables, which he could not get direct from natural sources. Dr. Campbell mentions that the Australian aborigines are the only savages who do not eat the larval bee in the comb. I have seen Africans eat it with great relish. He also refers to the strong taste of wild honey in Australia. Even much of the domestic honey of that country is decidedly strong to a palate accustomed only to the fine clover honey of English apiaries. The wild, from what I remember of a single essay, is positively rancid, though my solitary experience of it may have been unfortunate.—*Morning Leader.*

Notices to Correspondents & Inquirers

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

*** Free Seed of the "Chapman Honey-Plant."—We have sent free seed of the above to a goodly number of applicants, and will gladly supply all who write—enclosing a *stamped, addressed* envelope for same—so long as our seed lasts. Those who have received no reply to their applications will, therefore, please understand the reason why. Mr. W. Loveday forwards an application for seed sent to him by Mr. Frederick Jordan, who gives no address, and as the latter is not on the list of our subscribers, we cannot help him till address reaches this office. Mr. Loveday is also asked how to grow the plant in question, and for the benefit of all concerned has written the following simple directions for publication:—Sow thinly in February and March, or in July and August; plant out in open places, four to five feet apart, as soon as the young plant measures about three inches across.—W. L.

Geo. M. Saunders (Keswick). — Foul-Brood Legislation. — We see no valid reason for inserting now what we declined to publish on the 22nd prox. The explanations now sent afford no justification whatever for your unseemly interruptions and flat contradictions of the chairman when he was addressing the meeting on October 6. They only serve to show the flimsy foundations on which your statements were based. When we receive official and reliable information, with regard to the matters being dealt with, it will be published in due course. At present, however, we know of no County Councils having petitioned the Board of Agriculture beyond those mentioned on page 431 of our issue of November 3.

Novice (Cardiff).—Machine-made Combs. —You are only one more, among many well-intentioned and enthusiastic beginners, who have become imbued with the vision of inventing a machine capable of turning out ready-made combs for bees' use. We may go further, and say that people of long experience in the manufacture of comb-foundation have been occupied in costly experiments with the same idea in view; but —like perpetual motion—the desired end is as distant as ever so far as regards any practical utility. We have in our possession a sample of machine-made comb, supplied by a German firm, for use in brood-chambers, that seemed as near the mark as may be in some respects. But orders sent from this office on behalf of some B.B.J. readers —who desired to make a trial of the combs—are unfilled to this day. If, however, you are confident of being able to construct a machine that will turn out combs—entirely of beeswax—with hexagonal cells (not circular as suggested), we will be very pleased to give you our opinion on a sample if forwarded. On the other hand, we advise you to give up the idea of trying to make any such comb for use in sections, as proposed, and also not to incur more expense in the proposed machine than you are prepared to lose over it, if unsuccessful. There is no such difficulty in the manufacture of comb-foundation as you mention, with the "Weed" and other similar machines now in general use.

N. D. G. (Sheffield).—Supers for Straw Skeps.—1. By writing any of our advertisers for catalogue you will find section-racks specially made for use on flat-topped straw skeps, and, no doubt, similar appliances can be had for shallow frames if extracted honey is desired.

H. C. (Belfast).—Accident to an Old Subscriber.—We are sorry to hear of your unfortunate disablement through an accident while hiving a swarm for a neighbour, and we trust that after a further rest you will be able to resume work as usual. Our regret is further increased on learning of your being "compelled to forego the pleasure of subscribing to the B.B.J. at close of the year owing to diminished means," and how much you will "miss its weekly visit," and therefore as "a constant and appreciative reader for over twenty years,' we trust you will allow us to continue sending the paper for 1905 free of cost.

Honey Samples.

X. (Wilmslow).—Your sample has no distinctive flavour to define its source, though it appears to be mainly from orchard trees. The flavour is fairly good, but colour is a bit spoiled, maybe from a slight admixture of honey-dew.

Novice (Rotherham).—The flavour of sample is fairly good, and might win in class for granulated honey if shown at a local show. But it is too dark in colour and coarse in grain to be successful in a strong competition.

G. H. (Basingstoke).——Your sample of granulated honey contains a large admixture of honey-dew.

Editorial, Notices, &c.

FOUL BROOD BILL.

We wish to call the attention of our readers to the draft Bill, as finally approved by the Legislation Committee at their last meeting on November 16, and which we print below. This Bill has been duly submitted to the Board of Agriculture, and it now remains to be seen what the county B.K. associations and bee-keepers generally can do to induce their county councils to take up the matter, and petition the Board in favour of legislation, undertaking to put an Act in force if obtained. So far as we know, only two county associations—viz., Devon and Lincolnshire, have got their county councils to move, and only three of these have intimated any intention of acting; two, the Devon and Lindsay Division of Lincolnshire having already petitioned. There are sixty-three county councils in England and Wales, so that there is a great deal to do, and if any progress is to be made every county association should take steps without delay to bring the matter before their county council. The Legislation Committee had not at its last meeting received the information it required from Mr. Saunders as to how far matters had progressed with the county associations and county councils, and has therefore asked him for the correspondence that has taken place, and this, it is hoped, will be forthcoming at the next meeting on December 21, seeing that the committee do not wish to trouble those county councils who may be already acting. In the latter cases they would simply have to send a copy of the amended Bill with an intimation that in accordance with the resolution passed by the meeting of delegates of county B.K. associations on October 6 the B.B.K.A. was requested to again endeavour to obtain legislation for the better prevention of bee-pest. The council of the B.B.K.A., which is *ipso facto* the committee, have a mandate from the county associations to promote legislation, and no doubt they will use their best endeavours in this direction. We cannot, however, disguise the fact that the work has only just been commenced, and how much remains to be done before the committee reach the same stage as when the last Bill was promoted in 1896. It is to be hoped that every one will do all in his power to assist them, for only by united action can there be any prospect of success. It is, therefore, satisfactory to find that county associations are realising this, and we were pleased to see that the committee of the Lincolnshire B.K.A, which has already done its share of the work, passed the following resolution at its meeting on November 5:—"That the Lincolnshire B.K.A., while recognising the really good work done by Mr. George M. Saunders in the furthering of the passage of the proposed Foul Brood Act, trusts that he will not act independently of the British B.K.A. in the matter, as it considers united action is necessary to secure the passing of the Bill, which it so strongly supports."

It would certainly be a pity if what is being done now by the B.B.K.A. to promote legislation should be wrecked by injudicious independent action. The council of the B.B.K.A. are on very good terms with the Board of Agriculture, and if they have the hearty co-operation of county associations they may be trusted to do their best to carry out the wishes of bee-keepers.

DRAFT OF A BILL

FOR THE

BETTER PREVENTION OF BEE PEST.

Be it enacted by the King's Most Excellent Majesty by and with the advice and consent of the Lords Spiritual and Temporal and Commons in this present Parliament assembled, and by the authority of the same, as follows:—

1.—In and for the purposes of this Act the word "infected" means infected with Bee Pest, the disease commonly known as Foul Brood; the word "premises" includes lands and buildings; and the word "hive" includes any receptacle containing bees, or which has contained bees.

2.—Every Local Authority empowered to execute "The Diseases of Animals Act, 1894," shall have power to execute and enforce the provisions of this Act.

A Local Authority may (without prejudice to their powers of delegation under any other Act) resolve that the provisions of the Fourth Schedule to the Diseases of Animals Act, 1894, relating to Committees of local authorities shall apply for the purposes of this Act, and thereupon the said provisions shall apply accordingly.

Any expenses incurred by a local authority in the execution of this Act shall be defrayed in the same manner as the expenses of such local authority under the Diseases of Animals Act.

3.—For the purpose of executing and enforcing the provisions of this Act, a local authority may, by a warrant in the form in the Schedule to this Act, or to the like effect, authorise a person qualified by his knowledge of bee-keeping (in this Act referred to as a bee expert) to exercise the powers exerciseable by authorised bee experts under this Act.

Any such warrant shall extend to the whole or to such part as shall be therein specified of the area of the local authority,

and shall continue in force for the period (not exceeding *five* years) therein limited, but may at any time be revoked by the local authority.

A local authority may, if they see fit, grant warrants to more than one bee expert.

A warrant shall be sufficient if purporting to be signed by the Clerk of the local authority, without being sealed, and shall not be subject to any stamp duty.

4.—An authorised bee expert under this Act shall have the following powers and duties:—

(i.) He may enter any premises whereon he may have reasonable grounds for supposing that bee pest exists, or has within one calendar month existed, and may examine any stock or colony of bees, or product of bees, or any hive or appliance for bees which he may find thereon;

(ii.) He shall exercise and perform such powers and duties as may be prescribed by bye-laws of the local authority.

Any person who obstructs any authorised bee expert in the exercise of his powers, shall be liable to a fine not exceeding two pounds.

5.—A local authority may make bye-laws—

(i.) For requiring the notification to the local authority of the existence of bee pest, and for prescribing the mode of such notification;

(ii.) For prescribing and enforcing the treatment of infected stocks of bees;

(iii.) For prescribing and regulating the destruction of any infected stock or colony of bees, and of any infected hive or appliance for bees, and the payment by the local authority of compensation for any stock or colony of bees destroyed, the compensation for any such stock or colony of bees not to exceed five shillings;

(iv.) For prescribing and enforcing the cleanliness and disinfection of hives or other appliances for bees;

(v.) Generally for the better prevention of bee pest;

The provisions of Sections 183, 184, and 185 of the Public Health Act, 1875, shall apply to any bye-laws made by a local authority under this Act; provided always that the Board of Agriculture and Fisheries shall be substituted for the Local Government Board.

Such bye-laws may impose penalties not exceeding, in any case, five pounds for any breach of them, and shall be of no effect unless and until confirmed by the Board of Agriculture and Fisheries, but shall not require confirmation by any other authority.

Any bye-law of a local authority may be proved by the production of a copy of the bye-law purporting to be certified by the clerk of the local authority as a true copy, and a bye-law so proved shall be taken to have been duly made unless and until the contrary is proved.

6.—Any person who knowingly removes from his premises, or sells or disposes of to any other person, any infected bees, or any infected hive or appliance for bees, shall be liable to a fine not exceeding, for the first offence, *five* pounds; and for the second or any subsequent offence, *ten* pounds.

7.—All offences under this Act or any bye-law made under this Act may be prosecuted, and fines may be recovered by the local authority, or any bee expert appointed under this Act, in a summary manner before a Court of Summary Jurisdiction.

8.—This Act may be cited as "The Bee Pest Prevention Act, 1905."

SCHEDULE.

FORM OF WARRANT.

By virtue of the "Bee Pest Prevention Act, 1905," The Council of do hereby authorise *A.B.* of to act as authorised bee expert for the [Administrative County of or for the Parishes of in the County of or for the Borough of or as the case may be] for the period of and during that period to exercise within the limits aforesaid, all the powers exercisable by authorised bee experts under that Act, or under any bye-laws made by the said Council.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

AMONG THE BEES.

SOME RECENT EXPERIENCES.

[5711.] *Honey Sales.*—The remarkable inrush of nectar all over Scotland during the entire month of July caused an early glut in the home markets, and buyers held firm for low prices. Many sold out their clover sections at the low price of 8d.

foolishly, because at the very same time other producers on a pretty large scale sold at home readily at 10d., and this price has been maintained hereabouts right through the season. I got it for a twelve-dozen lot sent to Glasgow, and a nine-dozen lot sent as far south as Manchester. Heather honey went off readily at 1s 2d. and 1s. 3d., but here again the irony of fate seems to have told, for many sold out at 1s. In a season such as this I think no heather-honey should have been parted with at this small figure. If the consumer and producer could only be brought in contact, honey would sell more readily and at a higher price.

An Indian Summer.—What a glorious October we had! Right through from 1st to 31st it was delightful. Every single day of it almost bees were romping as if it were midsummer, and, although I would not certify that honey was being carried in, I suspect tiny quantities found their way to the store cupboard. Pollen-carrying went on to a considerable extent, and breeding was well maintained in some hives right through the month. November, from 1st to 20th, was, if possible, even finer; and then came winter keen and sudden. Seldom have bees had a better opportunity of preparing and arranging their stores for future emergencies than this season; and if (as it certainly may) autumn preparation can be considered the chief guarantee of good stocks for next year, we should have a superb season in 1905. Per contra, such fine weather may have proved a considerable drain on stores owing to bees displaying so much activity; therefore the best stored may have the better chance. Although not a great believer in candy, I advise all to read up old recipes, as this is a season when it may be urgently required.

A Bee's Flight.—A circumstance came under my observation this year which convinces me that bees when foraging make less extended flights than they are generally credited with. Two farmers, owning three and seven stocks respectively, one situated on a heavy, retentive soil, and the other on a dry, arid one, parted less than four miles, might be set down as examples of success and comparative failure. The man with the three hives secured 240 lb. surplus; the one with seven but 82 lb. Both had good strong colonies. Now, if bees forage so far afield as some maintain, why did not the bees leave the arid area and wing their flight to the richer pastures? The weather gave every opportunity for extended excursions, yet these bees must have stayed at home rather than fly over three miles.

Successful Bee-keeping!—A beginner who had purchased a good frame-hive last autumn was proud of his success. He had actually *three* swarms from it. Here was profit such as modern methods could not compass. Alas! the original colony had swarmed itself to death, leaving only a lot of drones; the third swarm died out from paucity of numbers, or perhaps from its queen failing to fertilise. The second swarm (or "cast") was a miserable lot, estimated at a pound of bees, with about half-a-dozen pounds of honey at the most. The first swarm had a skep well filled with *comb*, which they had been kept building out needlessly by eking. Their honey stores only occupied a few inches of the upper part and might weigh 15 lb. It is questionable if of the four lots *one* will survive the winter.

Bad Luck?—A bee-keeper received a powerful English swarm in June. Two days after he saw a queen thrown outside. He gave them a frame of brood and eggs and ordered a Southern queen, supplying her in a cage. Very soon she, too, was evicted. I am not certain if the queen-cells started were carried to fruition, but I think they were not. On examination early in July eggs were seen, but they never got past the stage of grubs. The stock died out by the early days of August, when an English driven lot was housed on the combs. Curiously, in a few days the queen of this lot was thrown out dead. The owner, supposing that two lots had been driven, hoped they might still have a queen, but on examination later no queen was found, no larvæ, and no eggs. A caged queen was given, but later she, too, could not be found. Another queen was supplied, being introduced by the "direct method." The hive has been winter-packed in the fond hope that its erratic history, so long a record of failure, will now take a turn and prove highly successful. I have a theory that the presence of one or more fertile workers accounted for the eggs seen in the combs in July, and for the ejectment of the second queen. I have also an idea that the original swarm was an artificial one, and that some injury to the queen in the making of it caused all the trouble, worry, and loss to the bee-keeper. I have no great faith in these early June artificial swarms, and very much prefer the natural system then.

Compensation—Five Shillings on the Other Side.—Of what value is a vile mass of foul-broody combs? Are they not indeed valueless, a nuisance to their owners and a public danger? If I had a hive suffering from the vile pest, I would set no value on the rotten mass, but, on the contrary, I would with the greatest pleasure give any expert 5s. if he would cleanse and disinfect my foul hive in such a way that he could certify that by its future use I would have no dread of a recurrence of the disease. Those who plead for 10s. com-

pensation are doing a public injury, for nobody can conscientiously say a colony far gone with Bacillus alvei is worth a tithe of that sum. Such at least is the result of my cogitations in regard to my recent experiences.

Queries *re* "Clearing Supers" and "Agricultural Produce Rate" will receive attention.—D. M. M., Banff.

FOUL BROOD LEGISLATION.

A COUNTY COUNCILLOR'S VIEWS.

[5712.] May I be allowed, as a bee-keeper and as one who has had considerable experience in public business on a county council, to state my views on the above subject? I consider that in framing the proposed Act, the existing laws dealing with the prevention of disease amongst cattle and sheep should have been closely followed. These laws may be divided into two heads: first, the prevention of the importation of live stock from countries where disease is rife among them; and, secondly, the stamping out of disease among animals in this country.

The proposed Bill confines itself exclusively to the second heading, while it must be evident to any one who considers the subject, that if the laws under the first heading are necessary in the case of animals which are, in most cases, only brought over to be fattened for the market, they are much more necessary in the case of bees, which are imported to propagate their species.

Under the proposed Bill, while there is power given to county councils to deal with hives suffering from foul brood,. there is nothing to prevent any one introducing a diseased queen, "foreign or home-bred," into his apiary, and so infecting a whole neighbourhood, and until this defect in the Bill is remedied, it is hopeless to get county councils to support it, as it entails considerable expense, with no prospect of permanently stamping out the disease.

Personally, I am strongly of opinion that our bees want no further importations of foreign blood to improve them, and that in the interests of bee-keeping it should be put a stop to. Then, with compulsory inspection of hives, and giving county councils power to pay for the destruction of wild bees in trees, houses, etc., would soon stamp out the disease, which a half measure like the Bill proposed by the Bee-keepers' Association will never do. I send name, etc., and sign—A COUNTY COUNCILLOR, N.B., December 5.

"A WELL-APPOINTED COMMONWEALTH."

[5713.] While many things in "D. M. M.'s" articles under the above heading in your issues of November 10 and 24 are doubtless true, many expressions are pure imagination, and the "creature" is glorified at the expense of the "Creator." The "instincts" of the bee are God-given, and are neither the results of "nature," "heredity," nor contact with man. There is nothing to show that bees now have more wisdom or skill, than the race was endowed with in the beginning. Everything made was "very good," and I do not think we can use stronger words to-day. I am conscious, alas! that the tendency of the age is to leave God out of sight, and to put "evolution," "nature," "natural selection," or some other figment of man's imagination in His place. I am one of those who refuse to allow the claims of any "theory" of existence and development which runs counter to the infallible Word of God. Evolution is a very pretty theory, but, at best, only a theory. "Survival of the fittest" has an imposing sound—it has imposed upon a large number—but if it is really a "law," why are we deploring degeneracy in many directions? Maeterlinck, in his "Life of the Bee," evidently accepts the "hypothesis of evolution." "In its favour," he writes, "are numerous proofs and most powerful arguments, which yet do not carry irresistible conviction." If the "proofs" and the "arguments" are such as he himself uses, I am not surprised at their failure to convince. He seems to give a reason why we should accept every new theory, when he says (p. 314): "It is well to accept the hypothesis that appeals the most urgently to the reason of men at the period when we happen to have come into the world," and he encourages us (?) by adding: "*the chances are that it will be false*" (italics mine), "but so long as we believe it to be true it will serve a useful purpose, etc."

In a burst of candour he adds: "It might at the first glance seem wiser, perhaps, instead of advancing these ingenious suppositions, simply to say the profound truth, which is that we do not know." But as a becoming humility would, he fancies, impede research, he thinks it better to expedite the latter, by embracing the fashionable "hypothesis," though "the chances" are against it being true. For my part, I am not ashamed to confess that I still believe in the "hypothesis of the fixity of species, and of Divine creation." It is the only one that explains all the facts, and all "the chances" are in favour of a triumphant vindication of its truth. "God made everything after his kind," is a condensed statement from a book which offers no "theory" or "hypothesis," but relates "facts," and that statement settles the question for me.—W. H., Brilley, Whitney-on-Wye.

(*Correspondence continued on page* 486.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

The apiary of Mr. Howard illustrated below affords one more of the many instances of bee-keepers who, after beginning with straw skeps, soon become converts to the frame-hive and modern methods of bee-management. We need to make no addition to the notes of his bee-experiences sent at our request. He says:—

"I commenced beekeeping fourteen years ago, buying a skep from a neighbour which swarmed in the spring, and after keeping bees in skeps for four years, I thought I must try my luck with a modern frame-hive. I therefore got one stocked and it swarmed the first season, so I got very little surplus, owing, perhaps, to my not returning the swarm as I ought to have done. I then purchased two more frame-hives late in the autumn from a gentleman who was leaving the neighbourhood, and the weather being too cold for me to examine my purchase, I packed the bees down for winter at once, after getting them home. When spring came round I made an inspection of the combs, and I found both stocks were affected with foul brood. Not knowing what to do next, I was told to spray with medicated syrup, which, according to my informant, had to be done two or three times a week all through the summer. This I did, and with such success that the bees seemed all right the next season; but the following spring they were as bad as ever. I, therefore, set to work and destroyed the lot! I then scorched the insides of the hives and washed well with strong carbolic and water, then painted them inside and out. I now firmly believe if foul brood once gets a foothold you cannot get rid of it without doing this. But I advise beekeepers never to 'buy a pig in a poke,' as I did, still, if one gets our fingers burnt, we need not despair, but try again, at least, if we wish to succeed. For my part I do not regret the trouble, for there can be no better hobby for any one to take up than bee-keeping, if a beginner will be content to start with one or two hives till he has learnt how to manage them and do every thing at the right time and in the right way. But before starting a job with bees, one should know how it has to be done, not begin as I did in my first attempt at bee-driving. My plan may serve as a lesson to others. So I will tell it. I began with two stocks in skeps, by turning one skep bottom upward and setting the other above, then tied a cloth round the junction and puffed in so much smoke at the feed-hole of the top skep before stopping it up, and so preventing any air getting in that. when I had thumped away for some time at the skeps and parted them to see if all had gone into the upper one, I found I had driven the bees to Kingdom come, for they were all dead!

"Now, I often see in B.B.J. and *B.K.R.* of

MR. A. HOWARD'S APIARY, TITSEY, NEAR LIMPSFIELD, SURREY.

'big takes' of honey that some have, but we do not come up to that high standard around here, seldom taking more than forty or fifty sections from one hive, but I have had two shallow-frame boxes filled, which would be a good seventy pounds of honey, from my best hives My apiary consists of eleven frame-hives and three stocks in skeps, which are as much as I can manage along with my garden. The figures seen in photo are my better-half and myself, along with our two youngest sons of three, the oldest being away from home at the time.

"Wishing all brother bee-keepers a successful year in 1905 and to our Editors and their Bee Journals all prosperity, I close my few rambling notes."

CORRESPONDENCE.

(*Continued from page* 484.)

CHILLED BROOD AND BEE PEST.

[5714.] I have been very interested in reading the letter of your correspondent "Humble Bee" (5703, page 466), especially the remarks about dead capped brood. We are all very familiar with the two expressions, "chilled brood" and "bee pest," but it is more than probable that brood also dies from many other causes, and if individual brood are not in every way robust, the time of greatest danger to their existence probably is when they are passing through the wonderful period of change which takes place after they have been capped over and are beyond all outside help.

I certainly think that more brood dies from so-called "chill" after it is capped over than before, but, at the same time, if a patch of brood of all ages is chilled, the bees may be expected to act like many house-wives do, and immediately remove from the home all that is objectionable and a danger to the community, but if other work is pressing they may allow that to remain which is out of sight and not offensive, until the place it occupies is required, in which case they will set to work with a will and clear away all that is useless.

In a corner of one of my hives I once found a piece of napthaline which was too heavy for the bees to carry, so they had almost covered it over with propolis, evidently to free their homes from its smell, which was not to their liking. This shows that the natural instinct of bees is to cover up what is objectionable to them, and therefore, I think, proves that what is already capped over (as are the isolated dead brood) does not appeal so strongly to them for its removal.

Last summer I placed a box of shallow-frames over a strong colony, without an excluder, and a few days after I found many eggs in the cells, when the queen was promptly caught and returned below, and an excluder put between.

The shallow frames were examined several times after this and no dead brood noticed, but, when all should have emerged as perfect bees, several capped cells were still seen, and these remained for a considerable time, although honey was being stored in the outside shallow frames. At the beginning of the main honey flow, however, not only the pollen, but every capping was removed, and each cell made clean in a wonderfully short time.

Like "Humble Bee," I am anxious to learn the cause of death of the occupants of these isolated cells, which are often seen on frames of otherwise empty comb, and look like neglected graves in the midst of a busy city. I send my name, and sign —BUMBLE, York, November 30.

BEES IN THE ISLE OF MAN.

[5715.] I am sending a brief report of the past honey-season in this part of the Isle of Man. I have not seen any honey-dew here, and the honey I took from my hives and also from those of others was of good quality, even quite close to Douglas. I may also say it is less trouble to me to bring stocks through the winter here, than when in Staffordshire. I can also vouch for the following remarkable fact: — In the middle of September, 1903, I chanced to get about a teacupful of bees with a young queen, and, having no spare combs by me at the time, placed them on foundation and fed them well. They made good progress last summer, and I got from them 68 lb. of splendid honey when the season closed. With best wishes to you and all in the craft—T. J. HORSLEY, Merridale House, Douglas, December 2.

WEATHER REPORT.

WESTBOURNE, SUSSEX,

November, 1904.

Rainfall, 1·37 in.	Minimum on grass, 16° on 23rd.
Heaviest fall, ·63 on 10th.	Frosty nights, 10.
Rain fell on 12 days.	Mean maximum, 51·8.
Below average, 1·90 in.	Mean minimum, 35·5.
Sunshine, 72·6 hours.	Mean temperature, 43·6.
Brightest day, 15th, 6 hours.	Above average, ·5.
Sunless days, 7.	Maximum barometer, 30·52 on 14th.
Above average, 4 hours.	Minimum barometer, 29·45 on 22nd.
Maximum temperature, 58° on 9th and 11th.	
Minimum temperature, 24° on 27th.	L. B. BIRKETT.

BACTERIA.

Many times during the period that I have been engaged in microscopical and bacteriological work, I have felt that some little explanation, in a simple way, regarding bacteria, and the many terms pertaining to them might be appreciated by at least a few interested readers.

The knowledge of germ life that is possessed by the majority of the people is the result of reading the newspapers. To those having made some study of the subject from reputable works, many of the newspaper items appear rather absurd, and are truly misleading. With the many important improvements that have been made during the last few years upon the microscope, the science of bacteriology has advanced very rapidly, and is developing much information that will add to the betterment of many conditions in our everyday life.

Bacteria is the name given to a class of vegetable organisms that exist everywhere and in countless numbers. Because of their minute size they are called microorganisms, being discernible only by aid of the highest powers of the microscope, in most instances.

The more common word "germ," meaning embryo, has come into general use, because of certain forms of bacteria being the origin of disease. Bacteria are simply a class of low plants. They are the active principle in many of nature's processes, and are as necessary to our life as the blood in our veins. They are the cause of putrefaction or decay of all animal and vegetable substances. They enrich the soil by a process of nitrification in a way that cannot be done by artificial means. They are the curing agents of the farmer's hay in the mow, as well as his fodder in the silo. In the dairy they are of great importance, the souring of the milk being caused by the action of bacteria, converting the sugar of the milk into lactic acid. The ripening of cream and its changes into butter, and the ripening of cheese are the direct results of bacteria growth. It is to their powers of producing chemical changes during their growth that they owe their importance in the world.

Bacteria are more universally prevalent in nature than any other forms of plants or the animals. They are in the air, water, and soil. They also cling in vast numbers to almost every object on the earth, including man and the lower animals. They do not, however, occur normally in the healthy tissues of man or animals. Under favourable conditions bacteria grow and multiply with enormous rapidity. A single bacterium in contact with a nutritious substance like beef gelatin will produce over fifteen millions of its kind in twenty-four hours. When thus surrounded by an ample food supply of the proper kind they increase or multiply by what is known as fission or simple dividing. Each individual upon reaching a certain stage in its growth will divide in the middle into two similar halves, each of which immediately starts to grow and repeat the process. Some species have been carefully watched under the microscope during their development and have been found to divide as often as every half-hour and in some cases in still less time. Not withstanding the hundreds of different species of bacteria there are only three general forms—spheres, rods, and spirals. Some of the spheres are large and some small, while the rods may be long or short, thick or slender, with either rounded or flat ends, and the spirals may be loosely or tightly coiled. To illustrate we might say the three forms resemble marbles, pieces of slate pencils, and coiled wire springs. In size the spheres vary from twelve one-millioneth to six one hundred-thousandths of an inch in diameter, while the rods and spirals vary in diameter from fifteen-millionths to one ten-thousandth of an inch, and in length from one but little more than their diameter to threads as long as one-hundredth of an inch. Bacteria are usually given a generic name, based upon their appearance under the microscope and their method of dividing during growth. Some of the more common names are micrococcus, streptococcus, staphylacoccus, and sarcina, all of which are given to the spherical forms. The rod forms are all given the generic name of Bacillus, and to this is usually added a specific name based upon some physiological character, as bacillus typhus—those causing typhoid fever. And in much the same way the spiral forms have come to be designated as spirallum—spirallum dentinum being a form which occur in the so-called fur of the teeth.

Many species of bacteria have another method of reproduction besides simple division or fission. It is by means of spores, which are usually round or oval particles of substance called bacteria protoplasm. These spores or protoplastic particles are capable of resisting conditions of heat, cold, or starvation that would destroy the ordinary bacteria.

There are among bacteria two different methods of spore formation—endogenous and arthrogenous. The endogenous spores are developed inside of the rod and spiral forms of bacteria itself. They usually break out of the rods and may remain inert for a long period of time or until they come in contact with proper food materials and conditions for development, when they start to grow and multiply in the ordi-

nary way. It is to this class of bacteria that the Bacillus milli of "Black Brood" belong. Arthrogenous spores are formed by breaking up of a long rod into short segments or sections. This form will not resist adverse conditions as well as the endogenous, and some authorities claim they are not true spores but are simply resting cells. Whatever the method of forming the spores, its purpose in the life of the bacterium is that of ensuring a perpetuation of the species, through its increased powers of resistance. Some species of bacteria possess the power of motion to and fro in the media in which they are growing. This motion is produced by hair-like appendages, one or more in number, which protrude from the ends or sides of the bacterium and are called flagella. It is believed that the flagella are developed from a protoplastic film surrounding the bacterium, their distribution being different in the different forms of bacteria.

Regarding the internal structure of bacteria, little is known other than that they are of very simple make-up. Of the many hundred of different species of bacteria there are but a comparatively few that are harmful to mankind. Of this class which are the cause of disease the largest number are bacillus, and are called pathogenic, while the harmless ones are called non-pathogenic. The pathogenic species are of two classes, those which are true parasites and those which are not. By true parasites we mean those which live upon and consume the tissues of the body in their growth, during which time they produce poisonous substances that may prove fatal when of sufficient quantity. Under this class may be cited the bacillus tuberculosis as a representative. The class of pathogenic bacteria which are not true parasites include those capable of living free in nature, and, though they develop the poisonous products during their growth in organic substances, it does no harm unless taken into the human system with the food. The poisons produced thus free in nature, ultimately become oxidised into harmless substances by their further decomposition. It will be seen therefore that only during the period between the forming of the poisons and their oxidation are they harmful. In contracting disease by inoculation with these pathogenic bacteria or germs much depends upon the physiological condition of the body at the time. If in a thoroughly vigorous state of health the tissues will be built up and the poisons eliminated before the bacteria can multiply in sufficient numbers to break down or weaken these natural forces. As before noted, there are but few harmful varieties compared to the whole, and it is safe to say that of every hundred different species of bacteria as they exist, at least ninety-five are in some way beneficial to us. In preventing the growth of bacteria there is usually employed one or two forms of substances existing under three names—antiseptics, disinfectants, and germicides. Antiseptics are those substances which only retard the growth of bacteria, while disinfectants are substances which actually destroy the cause of infection and are equivalent to germicides, which kill the germs. Disinfectants are usually antiseptics if used in a proper way, but the latter are not in many cases disinfectants. There is another class of chemical substances, usually strong oxidising agents, which will convert the strongly smelling products of bacterial decomposition into inodorous ones. These are called deodorisers, and may or may not be disinfectants. It is useless to attempt to disinfect the air except in tightly closed rooms, and even then to be effective it requires a quantity or strength of disinfectants in which it would be impossible for a person to live. Most of the so-called disinfectants in the market, when diffused through the air of an ordinary room, have no action upon putrefactive bacteria.—PROFESSOR R. M. BUNDY, in *American Bee-keeper*.

Queries and Replies.

[3621.] *Bees in Hive Roof.*—As a beginner with bees, I should be thankful if you would advise me with regard to a difficulty I am in with one of my hives. About the middle of last June I bought three stocks of bees—two in skeps and one in a frame-hive. I transferred the bees from the skeps—as advised in "Guide Book"—but the frame-hive puzzled me not a little. When I lifted off the roof in order to have a look at the inside, I found there were no quilts above top-bars of frames, or anything whatever between body-box and top of roof, which latter had been completely built out with comb and filled with honey. I drove the bees from the top into the body-box as best I could, and covered all up till I had emptied the roof of its contents. I then examined the body-box. I found some of the combs were built across each other in two or three places, where the former owner had pulled out frames and forgot to return them, so it was impossible to do anything then. I would therefore like to know:—1. What you consider will be the best way to transfer them into a new hive, and when is the proper time to do it. I had not a hive ready at the time I made the examination, and by the time I had made one I thought it was rather late to do

anything besides feed the bees up for the winter. 2. I should also like to know which you consider the most suitable for extracting: the shallow or the standard frame? I send name and address and sign—NEGLECTED BEES, Llanelly, S. Wales.

REPLY.—1. The first point to decide upon is: how many (if any) frames at present in the body-box are built out straight and fit for use? If there should be three or four good combs you might get straight ones built between these without the need for sacrificing any brood in the process. On the other hand, if the combs are so built that the frames cannot be manipulated, it will need entirely different treatment. Therefore, as nothing can be done till about next March or April, you had better ascertain the condition of frames and write us again giving more details, when we would be better able to advise. 2. We much prefer the shallow-frame for extracting purposes, and our preference is shared by the great majority of experienced practical bee-keepers.

[3622.] *Dead Bees Cast Out.*—Will you kindly tell me whether it is right that a quantity of dead bees—varying from 30 to 50—should be thrown outside from my three hives? To me it hardly seemed a natural process unless a consequence of the cold weather. Two of the hives which have cast out most bees, contain plenty of stores, besides candy. The third lot are dependent mostly on candy, and are the driven bees you advised me to unite to the others, as I obtained them very late. On a recent examination—owing, I expect, to prolonged autumn—I found a fair quantity of comb in the hive, so am going to risk them. Do not think that I disregard your advice, by any means, but I thought perhaps you will be interested to know how they turn out. Would vinegar, to keep it soft, in candy affect bees. I send name, and sign—APIS, Birmingham, December 3.

REPLY.—There is no cause for alarm in finding "30 to 50" dead bees cast out of hives at end of November. The probability is that you will see a much greater number cast out before the winter ends. The bees so found have died a natural death, and are carried out of the hive by their living comrades for sanitary reasons. Sometimes whole seams of bees perish through inability to reach the food in severe weather, and yet the hives seem not to suffer from the heavy death rate. Do not use vinegar.

[3623.] *Drones in December.*—Having been a reader of your B.B.J. for three years, and seeing how readily you advise inquirers about different cases, I am asking for a little help with regard to one of my hives. Yesterday the bees were flying freely, and I noticed at the entrance about a dozen drones. I, therefore, ask: Does that indicate that the stock is queenless? I am given to understand for them to be about so late it would mean that. Thanking you for advice I have had from reading replies in the B.J. to other inquirers, I send name for reference and sign—RIRI AXE, Wells, Somerset, December 1.

REPLY.—It is generally a strong indication of queenlessness when drones are found in hives so late in the year as this. You had better take advantage of the first fine day, when bees are flying freely, to examine the combs for further indications, such as partly formed queen cells, or maybe a young queen may be found. In which case it will be necessary to see if her brood hatches out all right in spring, and that drones are not being reared in worker cells.

[3624.] *Dealing with Vagrant Swarm.*—A swarm of bees took possession of an empty frame-hive, and a rack of sections were put on, but unfortunately the rack did not cover the frames at the front, consequently the bees had free passage-way to the roof and built a large quantity of comb therein. They have also stored some sealed honey there, but they have none in the frames of body-box. Last week I put some candy on top of quilt, to which latter the comb nearly reached down, as I thought the bees would require feeding. I therefore ask:—1. Should I now put some candy under the quilt and cover up warmly? 2. Do you think the bees will go down for the warmth? 3. Would you please advise me if you know of any means to get them down? Your answer will oblige—A CONSTANT READER, Belfast.

REPLY.—1. You will certainly need to do this if the bees have no stores below, and give a 4-lb. cake of soft candy at least to start with, or they may pass up into the hive roof and winter on the food-stored combs above. 2. They will be far more likely to go up for both warmth and food. 3. Only by cutting out the combs and brushing the bees from them on to flight-board of hive as removed. But it is now too cold for such operations as transferring bees on to broodless combs.

[3625.] *Raw Sugar for Bees: Moving Hives in Winter.*—(1) Will you kindly tell me whether I should be doing right—in the event of my bees being short of stores—by giving them raw "foot" sugar as winter food? (2) Can you tell me of a good recipe for making soft bee-candy? (3) Will it be safe to move hives of bees a long distance this period of the year? I mean, would there be any risk of the bees forsaking the hive when allowed to fly from their new location? I ask this question because it was my intention to have a couple of stocks sent up from the country. I am only a beginner with bees, and should

be grateful for any advice given through the B.B.J.—J. R. BLACKWELL, Camberwell, December 5.

REPLY.—(1) Raw sugar is not at all suitable as winter food for bees. It is too laxative in its nature, especially at carry-over time, when the bees are often confined to their hives for many weeks without the chance of a cleansing flight. (2) The best recipe we know of is that given in the "Bee-keepers' Guide Book." We also consider a text-book on bees to be indispensable for all beginners who wish to succeed. (3) The bees will take no harm if moved several miles at any period of the year.

[3626.] *Insect Nomenclature.*—Would you kindly tell me what the enclosed insect is? It is something between a beetle and a bee.—H. KENNARD, Burbage, Wilts.

REPLY.—The insect is one of the burying beetles — *Necrophorus vespillo.* It buries the dead bodies of birds, mice, etc., by hollowing the earth beneath them, until they sink below the level of the soil. It then lays its eggs in the carcase.—F. W. L. S.

Notices to Correspondents & Inquirers.

ERRATUM.—In fourth line of our reply to Mr. George Saunders on page 480 the words "22nd prox." should read *22nd October.*

*** Free Seed of "Chapman Honey Plant." (*Echinops Sphærocephalus*). After exhausting the copious supply of seed in hand, along with a second lot furnished by Mr. Loveday, we find ourselves with over a hundred stamped addressed envelopes on hand, and no seed left. Applicants may, however, rest assured that they will get some seed in course of a day or two, Mr. Walter F. Reid—who is, of course, responsible for the new interest aroused in the plant—having, in response to our appeal, come to the rescue with the promise of more seed.

*** A November Swarm (?).—A correspondent from Christchurch, Hants, writes, December 5:—"It may be of interest to readers of the B.B.J. to know that a swarm of bees issued from a skep on November 18 at Winkton Common near Christchurch, Hants, and was safely hived.—H. H."

F. L. (Sevenoaks).—Raw Sugar for Candy Making.—Raw, or unrefined, cane sugar is altogether unsuitable for making bee-candy. Nor can we wonder at its not setting hard. We should not care to use it up in preparing syrup-food in spring, though the bees would probably take it if offered. It would, however, make a sorry kind of bee-food compared with syrup from good, refined cane-sugar crystals.

A NOVICE (Nailsworth, Glos.).—Dead Bees Cast Out.—1. You will observe, by replies to queries in this issue, that it is quite comon to find good numbers of dead bees cast out of hives in winter, with no evil effects on the stock. 2. It is an established fact that bees consume less food in a severe winter than in an open mild one.

NOVICE (Bucks).—Bee Nomenclature.—Of the two samples sent in, No. 1. bees are Italians, but not of pure breed. They show a trace of being crossed with the Carniolan. No. 2 are the common brown variety.

KENTISH BEE (Tonbridge). — Candy Making.—Your sample of what is supposed to be "soft bee-candy" is rather overboiled, and is in consequence too hard for the purpose. It has also not been stirred long enough when cooling, and is not so smooth or "buttery" in grain as it might have been. The materials used are evidently quite right, and it only needs attention to the above points to make a very good candy.

R. MANDEVILLE (Brighton).—The B.B.J. of September 1 last contains a tone-block illustration from photo of the plant, which gives an excellent idea of its appearance when well grown. Cultural directions appeared on page 480 last week. Your seed will be sent in a day or two. (See notice above.)

H. M. MIDDLETON (Norwich).—Bee Nomenclature.—Both dead bees sent are workers. The larger of the two might easily deceive an inexperienced bee-keeper by reason of its size through abdominal distension, but, beyond that, it bears none of the characteristics of a queen bee.

Honey Samples.

R. B. D. (Kendal).—Your sample of granulated honey is nice in flavour, and by the time it becomes solid will be a good marketable honey.

H. C. B. (Stoke-on-Trent).—Of the three samples sent, No. 1 is mainly from white clover, and by far the best; it should do well on the show-bench if staged in class for granulated honey. We cannot say how it would look when reliquefied, and, on this account, advise its being shown in its present form. No. 2 (also granulated) is far behind the first in quality. No. 3, though still liquid, is rapidly granulating, but shows a tendency to ferment during the winter. If —as we of course presume—all three samples have been gathered in your own apiary, the bees must have a very great change in the bee-forage available at different dates, each sample having a distinct character of its own.

*** *Several Letters and Queries are unavoidably held over till next week for lack of space.*

Editorial, Notices, &c.

BILL FOR PREVENTION OF BEE-PEST

On page 481 last week we printed the "Draft of a Bill for the Prevention of Bee-Pest," which had been approved by the Legislative Committee, and submitted to the Board of Agriculture. By comparing the Bill referred to above with those published in B.B.J. of October 6 (page 391), it will be noticed that, with a few alterations, the text of the original Bill proposed by the B.B.K.A. in 1896 has been adhered to. The Committee's Bill differs from that amended and circulated by Mr. Geo. M. Saunders during this year, in that it is more comprehensive. It will be seen that Clause 2 of the Bill submitted by Mr. Saunders reads thus: "Every Local Authority, *in England and Wales and Ireland*, empowered to execute 'The Diseases of Animals Act, 1894,' shall have power to execute and enforce the provisions of this Act *within the area of that Authority, and the expression 'Local Authority,' shall be construed accordingly.*" In addition to this, there is a special Clause (9) which states that "*This Act shall not extend to Scotland.*"

The important difference in the Committee's Bill is that it excludes no one, as will be seen by a perusal of Clause 2, which reads thus:—"Every Local Authority empowered to execute 'The Diseases of Animals Act, 1896,' shall have power to execute and enforce the provisions of this Act." We have italicised those words not found in the Committee's Bill. In the latter, also, there is no Clause to exclude Scotland, so that if the measure became law in its present form it would be as equally applicable to Scotland and Ireland as to this country. We call attention to this because an endeavour is apparently being made in Ireland to create a misunderstanding amongst our Irish friends, with regard to our attitude towards them, in the shape of an attempt to make it appear that we wish to exclude Irish bee-keepers from the advantages of legislation. Nothing has been further from our thoughts than this, and we should only be too pleased to hear that our Irish friends had obtained the desired end, even if we failed to secure it for ourselves, realising, as we do, that it is equally important for the bee-industry on both sides of the Channel. What we do maintain, however, is that we should mind our own business, and not meddle with that of our neighbours.

Our attitude, as also that of the Chairman of the B.B.K.A., has not only been entirely misunderstood, but has brought forth a vigorous and hostile article—four and a half columns long—in our contemporary the *Irish Bee Journal*. As a rule, we should treat such criticisms as in bad taste and unworthy of notice; but as a direct attack has been made upon the B.B.K.A., and the paper containing it is being circulated gratuitously amongst County Associations, with the evident object of creating dissension between the parent body and its affiliated Associations, it becomes our duty to defend the B.B.K.A., to whom is due not only the present position of bee-keeping in this country, but also in Ireland. We also hope to make plain the unreasonableness of the writer of the article in question, who, without troubling to make himself fully acquainted with the facts, has relied on erroneous information. He says, referring to the B.B.J. "It was in the editorial columns of that journal, on September 29, that the first intimation was given of a desire to exclude Ireland from the scope of the proposed legislation, a suggestion to which we referred last month, and which called forth a vigorous protest from the Committee of the Irish Bee-keepers' Association." The Committee of the I.B.K.A. seem also to have been misinformed, for, in the report of a meeting held on October 6, when this "vigorous protest" was made, we find: "Rev. J. G. Digges submitted correspondence *re* the proposed Foul Brood Bill, and a suggestion in the BRITISH BEE JOURNAL to the effect that Ireland should be excluded from the scope of the Bill." Whereupon the following resolution was passed: "That it having been reported that a desire to exclude Ireland from the benefits of the proposed Foul Brood Bill has been expressed in the BRITISH BEE JOURNAL, this Committee protest in the strongest manner against any such arrangement, especially as this Association has worked up a considerable amount of support for the Bill in Ireland."

Now, if readers refer to our remarks on page 381 they will find no expression of a "desire to exclude Ireland from the scope of the proposed legislation." Our words are as follows: "It is thought that the Council of the B.B.K.A. will do well to allow the Irish Bee-keepers' Association to take its own course in the matter of dealing with a Foul Brood Bill for Ireland. After what has been done by the 'Congested Districts Board,' and is now being done by the new 'Department of Technical Instruction for Ireland,' in giving Government aid to bee-keepers in the Sister Isle, it would seem advisable that we on this side the Channel should keep our cause apart in approaching our Board of Agriculture." In saying this we expressed not only our own views but also those of others who think as we do, that, as already said, we should mind our own business, and allow Irish bee-keepers to attend to theirs.

It is true that in 1896 we took an entirely different view, and were then quite prepared to co-operate with the Irish bee-keepers, but circumstances have so completely altered since that time that any such action on our part now would only amount to meddlesomeness. There was at that time only one Board of Agriculture for the two countries, but now Ireland has a Department of Agriculture of its own to attend to such matters, and it is clear that English bee-keepers have no right to interfere, only Irish bee-keepers being entitled to approach it.

As the Bill now stands, it remains for our "Board of Agriculture and Fisheries" to say whether Scotland and Ireland should be excluded; and as regards the latter, no doubt this would only be done after consultation with the Irish Department of Agriculture, who would have to decide whether they wish for legislation of which they would have to bear the cost. We therefore think that the Chairman of the B.B.K.A. was right when he said: "The best course for English bee-keepers was to ask for their own Bill, and Irish bee-keepers could ask the Government to extend it to Ireland." There is quite enough for the B.B.K.A. and its affiliated Associations to do in promoting legislation and getting our own Board of Agricuture to act without adding to their work by meddling with other people's business.

The writer of the article we are dealing with winds up by saying: "The B.B.K.A. Committee, however, have sent out a new Bill for approval by the County Associations, and from the scope of this Bill Ireland is excluded" It is quite evident that he has again been misinformed. But, in any case, we can afford to smile at his concluding words and the direful consequences they imply. He says: "With 103 Irish Members in the House, the hope of carrying a Foul Brood Bill for England, if it involves opposition on the ground of injustice to this country, must be infinitesimal." We give these 103 Irish Members more credit than to suppose that they do not know how to get a measure of this sort extended to their country if it be needed. We should indeed be sorry if any injustice were done to Irish bee-keepers, whose interests we have always been pleased to promote; but we must treat the subject from a practical common sense point of view, and put sentiment aside.

We hope in future articles to refer fully to the attack on the B.B.K.A. and other matters referred to in this article, and also explain the reason for the attitude of the Irish Department of Agriculture and Technical Instruction towards the movement.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[5716.] Your correspondent, Mr. Brown (5706, page 472), and all who are interested in the subject have now before them the consummated work of the Committee duly appointed at the meeting at Jermyn-street on October 6 to draft an Act that would—shall I say?—*please all bee-keepers*. We have their draft as printed in B.B.J. on December 8, and the question arises: Does it please the minority of bee-keepers? I contend that the majority of bee-keepers in the country know nothing—or practically nothing—of even the inception of an Act intended to govern and coerce them; and I also contend, from data to hand, that nearly all the large bee-keepers and honey producers in England are in opposition to the Act. Moreover, I contend, and without fear of contradiction, that the Act has been sprung on the County Associations by a small clique, and if it should ever become law—which I earnestly hope it never will—it will be at the instance of similar small cliques. In our own county there was a chance obtained of a majority of one simply because other members of the Council were unable to be present, otherwise we should have had a majority against it; and I have no doubt, from information received, that it is the same in other counties.

I am glad Mr. Brown uses the word "*attempt* to prevent." I have a letter before me from a prominent bee-keeper who relates several instances in which foul brood has broken out in apiaries shortly after being "*inspected*" by experts. I also fail to see anything relevant in the simile Mr. Brown tries to raise between bees in the country and the regulation of street traffic in London. What would the poor policeman have done if all the vehicles had been flying-machines (and bees fly)? Then Mr. Brown infers when on his missionary tours that all stocks which are weak are diseased. He ignores the fact that there are other reasons for paucity of bees in hives besides foul brood, such as worn-out queens, short stores, etc., etc. Personally, I have no fear of disease reducing my stocks below a hundred. That "law of Nature" teaches my bees to increase, and

if I had not a sale for swarms every season my apiaries would in a few years compare with our American friend's bee-yards in point of number of stocks. *No expert has ever* examined my hives, and I have not been troubled with the bee-pest. *Verb. sap.*

There is no clause in the drafted Act to clear out the stray swarms located in all manner of places where a stray swarm can take possession. How will the *inspector* cure these errant colonies? What service would the Medical Officer of Health render to a village suffering from small-pox if he had power only to isolate and attempt to cure the house-dwellers, while the gipsy under the hedgerow or in his van was exempt from control?

Referring to the editorial on page 481 last week, from letters I have received recently it seems probable that there will be no united action in the counties. A small party of bee-keepers—chiefly secretaries and experts—will try to move their County Councils to petition for the Bill, and the large bee-keepers—the really practical men—in each county will countermove the County Council that no "Bill" is required.—W. Woodley, Beedon, Newbury.

PREVENTION OF BEE-PEST.

THE DRAFT BILL.

[5717.] I had the fullest confidence that the Committee appointed to deal with the question of legislation for dealing with foul brood, or bee-pest, would do justice, as far as is possible, to all parties interested in the subject under consideration. I am, therefore, disappointed to find that in the draft Bill published on page 481 last week there are no safeguards against the importation of bees from infected apiaries in other countries. If we shut our doors, so to speak, to keep out an enemy and a scourge, why leave a free passage for that enemy down the chimney?

Quite apart from the question of infection, my experience is that the amount of benefit that English bee-keepers have derived by the unrestricted importation of foreign bees is exceedingly small. I see beauty in a well-marked Italian queen bee, and I find beauty, too, in a well-bred English queen bee, while the beauty of the latter is enhanced by knowing of the solid utility behind it. This is what an Englishman first and foremost needs and demands. The latest bee introduced from America—the "yellow bee," or "glorified hornet"—I decline to accept as a gift, as I think this bee, even if it does eclipse in appearance our native brown bee—that has so well served us through past ages—has in reality nothing better to give us in quantity and quality of work! I say the latter is not wanted, and could not improve the English bee by crossing. By selection in breeding of both queen and male bees, and introducing new blood from a distance when found to be desirable, I have been able to work up a strain of bees that have given returns equalling the best ever mentioned in your pages; but foul brood has almost completely robbed me of a strain of bees to which I had devoted twenty years of care.—Wm. Loveday, Hatfield Heath, Harlow.

"EVOLUTION OF THE HYMENOPTERA."

[5718.] "We find, even to-day, among the melliferous hymenoptera, all the stages of progressive civilisation of our own domestic bee," so says Maeterlinck, "Life of the Bee," p. 25. By which, I take it, he desires his readers to believe that Prosopis is the distant ancestor, or, rather, ancestress, of Apis mellifica. And yet he tells us that the latter "is, above all, and even to a greater extent than the ant, *a creature of the crowd.* She can only live in the midst of a multitude." This, he says, is an "*essential trait*" of her nature. While of the former he assures us that we "find her *working alone* in wretchedness, often not seeing her offspring," leading a "life of starvation," and dying "in a corner, as solitarily as she had lived." Certain questions suggest themselves to my mind when I think about these statements. For example: How did Prosopis, who utterly lacks the trait of *sociability,* transmit it to her assumed descendant, in whom it is of the essence of her nature? If some of the offspring of Prosopis have, through countless ages, raised themselves to the height of our domestic bee, how is it that the original stock is still existent, and not improved off the face of the earth? And the same may be asked of all the other species through which Apis mellifica is assumed to have been evolved. All are still surviving, "fit" or "unfit." The only things missing being the "*links*" necessary to unite these essentially different species into a chain strong enough to bear the strain of the evolution theory.

If the evolution hypothesis be true, and if Nature is steadily working to improve the race, how is it that the longer tongue of the humble-bee has not been inherited by the honey-bee, when it would have been so very useful (particularly to the evolutionist)? Further, how is it that the power of secreting wax possessed by the drones of Meliponitæ has been lost by their descendants, the drone of Apis mellifica? Nature has been bungling matters here surely. The progress is backward. It is usually in the lower races that the males are idle. Improvement means diligence.

But in the insect "next to man in intelligence," the best-known trait is work-shyness. To be as "idle as a drone" is proverbial.

Evidently Maeterlinck feels keenly the weakness of his theories. He assumes evolution. He finds movements (as he calls them) arrested. They do not evolve as they ought. Nature is inconsiderate. However, he can plead in arrest of an adverse judgment: "Are these movements definitely, and for all time, arrested in each one of these species, and does the connecting-line exist in our imagination alone? Let us not be too eager to establish a system" (the very thing he is trying to do) "in this ill-explored region. Besides" (and here I entirely agree with him) "let us not forget that our ignorance still is profound."—W. H., Brilley, Whitney-on-Wye.

BEE NOTES FROM CORNWALL.

"A WELL-APPOINTED COMMONWEALTH."

[5719.] Your correspondent, "W. H." (5713, page 484) I think comewhat misunderstands the use of the term "Nature" as employed by "D. M. M." and other writers. It in no wise follows that those who speak of "the results of Nature," etc., deny the idea of God; they may or may not. If Nature be God's handiwork we do not necessarily ignore the Maker by describing the phenomena around us as "Nature"; it is a convenient term to include everything.

Similarly as regards the theory of evolution when we say that the world and its inhabitants have evolved, we merely state that everything was not fashioned exactly as it exists to-day, but that it has been evolved or developed to its present state. This simple statement in no way implies the want of belief in a Maker; it simply states the method adopted or followed in the production of natural phenomena.

Darwin's theory of the "Origin of Species" is something more than a theory. We know for certain that fresh and distinct varieties of life are, even in our own time, being evolved. The vast number of varieties of the apple, for example, have been evolved from the almost useless wild fruit known as the crab-apple. The tiny toy terrier and the powerful St. Bernard dog had common ancestors; so had our domestic cat and the wild tiger, or giant cat.

And so with regard to bees. The Italian and Carniolan bee, no doubt, came from the same source as our English bee. These are facts easily proven; but the fact of evolution in no way explains the great mystery of life. There is an incomprehensible force in Nature that produces all phenomena; that force did not set up a workshop, and by the aid of certain tools proceed to make men and animals, plants and microbes. We know that it has done its work in a far more spiritual and intangible manner. It did not make a perfect apple to begin with, and fix its type for ever, but it did make an imperfect ancestor, which was yet perfect, inasmuch as it was endowed with the possibility of perfection, and as a result we have now quite 1,000, or rather more, almost perfect varieties of the apple, and new varieties are continually being evolved. Those who take this view of the universe are not less spiritual or less reverent than those who do not. They may be even more reverent because of possessing a fuller knowledge of the methods of the Great Force, while at the same time they confess their utter inability to explain the nature or origin of that Great Force though continually pondering it over.—W. J. FARMER, Truro, December 12.

(*Correspondence continued on page* 496.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

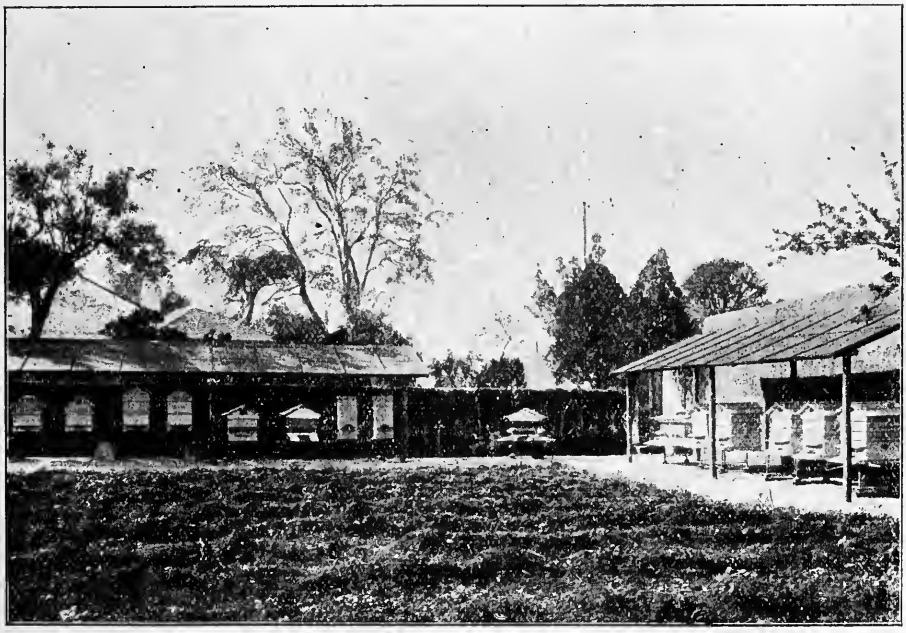
The neat and very business-like apiary of Mr. D'Almeida Lima, shown on next page, appears opportunely at a time when the visit of the King and Queen of Portugal has aroused more than ordinary interest in that country and its popular ruler. Judging by the cordiality with which King Carlos and his Royal consort have been received whenever they appeared in public, and the evident pleasure it afforded them, we may be sure the Royal visitors have enjoyed their trip to England as guests of our own loved Royal Family, and that they will carry away with them none but pleasant recollections of their stay, notwithstanding the proverbial variableness of our fickle climate in November.

With regard to our bee-garden picture, we have in its owner a B.B.J. reader who, while full of enthusiasm for the bees, and readily adopting modern methods of bee-keeping, has had the foresight to observe the exceptional conditions of his own country, where bees labour all the year round. For the rest, his interesting "notes" speak for themselves. He says:—

"I began bee-keeping in 1898, at which time I was staying with my family in the north of Portugal, where I was introduced to a gentleman who has landed estates in Douro, and also near Porto, and is one of the best bee-keepers in the north of Portugal. One day our conversation turned on the subject of bees. I had read something of modern methods of bee-keeping,

but at this time had never even seen a modern hive. In due course my friend invited me to go and see a modern apiary. I was very pleased to accept the invitation. The apiary visited is a small one, established by my friend near his residence in Porto. I was enchanted with what I saw, and from that moment made up my mind to start bee-keeping the following year of 1899. I live in the suburbs of Lisbon, and my house is surrounded by an orange grove. We have also kitchen and flower gardens; and all my neighbours have houses with similar surroundings to mine, so that the bees have plenty of honey-producing flowers from which to gather good honey. I began with four of what are known as the 'Sussex hives' that my friend sent me from Porto. One of my neighbours kept bees, on the old system, in hives made of cork-wood, so that in the early spring (March, 1899) his bees began to swarm, and he gave me four swarms, which were duly hived in my frame-hives. The bees did very well that year, but in the following winter one of the colonies died.

"The following spring (beginning of April, 1900) I caught a swarm, and with it restocked the hive in which the bees had died, while on the other three I put surplus-chambers. The bees did so well in these that by August I had the whole fifty-four sections all full of beautiful honey. This favourable result gave me a desire to have more hives; but, as I found the 'Sussex' bee-hive too small, I bought six 'Gariel' hives, such as are used in France, but with a modification by a Mr. Sequeria, of Porto. This modification consists in the super frames being made of the same size as those in the brood-chamber, which makes the 'Gariel' much larger than before. These hives are good, but do not equal either the 'Wells' or the 'Dadant Blat' that I also have. The hives in my apiary are of many types, as the following list will show:—Four 'Sussex,' six 'Modified Gariel,' three 'Dadant-Blat,' and one 'Wells.' In this country, especially in the south, there is no snow, and the bees work all the year round, and very seldom—perhaps three or four days in the year—do they remain inside for the whole of the day.



MR. JORGE A. D'ALMEIDA LIMA'S APIARY, LISBON.

"My opinion with regard to making a success of apiculture in this part of Portugal, the main things really necessary are large-sized hives, well kept and stocked with strong colonies of bees. The past year of 1904 has been very good for bee-keeping. I have had an excellent harvest of good honey. The "Dadant" and the "Wells" hives are strong and full of stores, but as they are stocked with swarms no supers were given, but all stores left for the bees' use. We do not use Italian bees in this country, and although I have a wish to try them, am afraid to import foreign bees on account of foul brood, as in this

country that pest to bee-keeping is happily unknown, and we know that foul brood can be imported with the foreign bees.

"As a subscribed to, and reader of, the BRITISH BEE JOURNAL, I send a view of my hives for your 'Homes of the Honey Bee.'"

CORRESPONDENCE.

(*Continued from page* 494.)

RESTORING ANIMATION IN BEES.

HOW LONG DOES COMATOSE STATE LAST?

[5720.] I wish to call the attention of your readers to a fact which I think is not generally known, and which, were it known, would oftentimes enable an owner to save his bees during a severe winter.

It is this: That when bees have consumed all their winter stores, they do not die of starvation, but of cold. Your readers may say, perhaps, what does it matter whether they die of starvation or of cold? But it matters very much, as I will prove. In the first case, the bees would die outright; but in the latter they become chilled, and insensible for some time, before actually dying, and may be revived if taken in time. It would be interesting to ascertain for how long they remain insensible before they die. It must certainly be for a good many hours.

Most bee-keepers, I think, know that when a combination of sun and snow has tempted bees to take flight in frosty weather and they chance to alight on the ground, they cannot rise again, but, although apparently lifeless when picked up, are not dead, and a very large number of these bees may be revived by warmth. Well, exactly the same thing can be done with bees that have come to the end of their stores, even when not a single one among them shows any sign of life.

To illustrate this, I will relate what has happened in my own case: The first occasion on which I was able to revive a hive of bees by warming occurred about twenty years ago; since then I have saved many. The particular hive to which I refer was kept in my bedroom, with, of course, an exit to the open air (I need hardly say, in those days, I was a bachelor). The bees had an ample supply of stores, or so I thought, but were not strong. Cold weather that year began early in January, with several weeks of hard frost. Before the cold came not a sound was to be heard from the bees, unless their hive was tapped, but as soon as the frost came there was a loud hum heard in the hive all night, and as the cold increased the noise the bees made became louder, until there was a continuous roar day and night.

I had got so accustomed to the sound as to hardly notice it; but one evening on retiring for the night I noticed my bedroom seemed strangely still, and it immediately struck me that no sound came from the bees I tapped the hive, but all was as silent as the tomb! On opening it not a bee showed any sign of life, nor was there an ounce of food in the combs. As a forlorn hope I lost no time in shaking out all the bees I could, the queen amongst them, and placed them in a box in front of the fire to warm. To my delight, in less than an hour there was hardly a dead bee! I then restored them to their hive, pouring a little warm syrup between the combs, covered all up, and left them in front of the fire until the whole was thoroughly warm and the bees quite lively; the hive was then returned to my bedroom, and the colony carefully fed with warm syrup every few days. The following summer that stock of bees gathered 100 lb. of surplus-honey, which is the largest quantity I have ever obtained from one hive, the neighbourhood being but a poor one for bee-forage.

Next winter I saved another hive, this time one kept outside in the garden. It was my habit to go down the garden at least once in the day, but on one occasion when passing the hives on a very cold day I observed a number of bees at the entrance of the hive in question, from which they had evidently tried to crawl. Thinking that something must be wrong, I at once made an examination, only to find the bees all apparently dead! Remembering my previous success, I at once conveyed the hive indoors and set it near the fire. I then closed the entrance, removed the quilts, and poured a little warm syrup between the combs, and awaited events. After some little time I observed a slight movement in some of the bees, so replaced the quilts, and let the hive remain near the fire. This time it was quite two hours before the bees were revived enough to be returned to their stand. Now, this stock went into winter quarters with more stores than any other hive in my possession, but they were weak, and of course consumed their food in the endeavour to keep up the heat of their hive.

Since then I have managed to save several stocks by keeping a close watch on the entrances during the cold season. It is an infallible sign of food having run short when, in very cold weather, bees make an attempt to crawl out of the hive.

Of course, it is a great mistake to keep weak stocks at all; but it does not always follow that the bee-keeper alone is at fault. Sometimes hives that are strong when packed for the winter become weak through the large numbers of old worn-out bees which die off from natural causes. Be-

sides, bees cluster more closely together in cold weather, and in this way become separated from a good part of their stores, and then starve from want of food. Only on two occasions have I been unsuccessful in my attempts to restore bees to life; once I was too late, and the next time I revived the bees with the exception of about thirty or forty on the floor-board, amongst which, unfortunately, was the queen.

Hoping my experience may be of some interest, and that other readers will give their views on restoring bees to life.—C. H. OLDHAM, Southgate, N., December 10.

THE NOMENCLATURE OF "FOUL BROOD."

[5721.] The suggestion made by Mr. W. H. Harris in B.B.J. of November 3 (page 432) to rename our common enemy is opportune, for the commonly-used term, as per caption hereof, is certainly misleading. It is easy to write of foul brood that is not "foul brood," but it certainly is a bit awkward to *talk* in inverted commas. As showing what the term conveys to the lay mind, I may mention that a newspaper report of one of my lectures concluded with: "Finally, Mr. Edwards threw on the screen a very fine picture of a foul brood."

There is not, I think, any need at this juncture or in this connection to unduly worry ourselves as to whether the disease is purely one of brood, or of brood and adult bees alike. Certain it is that whilst it is in destruction of brood that it hits us hardest, yet although we can generally combat the scourge by the removal of all infected matter, anyone who has wide experience in dealing with it will be pretty sure to come across that "one case in a hundred," when indications plainly point to the re-establishment of the disease in a renovated colony to be due to adult bee infection.

But in regard to the suggested substitution of terms, is not "bee-pest" also misleading? There are not a few things that are more or less pestiferous to bees, and in some parts the big wax-moth is as big a scourge as *Bacillus alvei*, though, be it noted, the presence of the former in scourge magnitude always, I think I may safely say, betokens the near presence of the latter, although the converse will not hold good in all districts.

It seems to me that if we alter the nomenclature of the disease we shall best avoid ambiguity by passing words in common use to which a dual meaning may attach, and coining a brand new one for the occasion. May I suggest "Apipest"?—H. EDWARDS, Sunningdale, December 7.

Queries and Replies.

[3627.] *A Beginner's Queries.*—1. When examining a hive in order to see how many frames the bees cover, must each frame be lifted out of the hive? Or can I judge by raising the quilts and observing if the bees fill up the spaces between the frames? 2. Do bees store candy from top of frames downwards as they do sugar-syrup? 3. When all the candy is consumed am I to understand that there is no more food in the combs below? 4. Would any harm follow if the bees were left for a few days after candy had been taken without a renewal of the supply? 5. Is there any means—at this season—of knowing if each of my three hives has a queen? The bees fly on fine days, and one lot is still carrying in pollen. 6. Is it possible for me to know if any of my sections contain honey-dew? 7. Will bees work the same in a hive containing twelve or more frames as in one with only ten? I send name for reference, and sign—DOUBTFUL, St. Heliers, Jersey, December 10.

REPLY.—1. The frames must be raised more or less before you can tell if they are well covered with bees. Begin with outside frames, and it will soon be seen how many are only partly covered, then start at the opposite side and do the same. The centre combs need not be lifted at all. 2. Then store the candy in close proximity to the cluster. 3. No; bees will consume the candy while having plenty of food in the sealed combs. 4. Yes, if the colony is quite foodless. 5. Only by examination; you cannot judge from outside at this season. 6. By holding the section up to a good light it is easy to see if any of the cells contain dark honey. 7. Yes.

[3628.] *Feeding Bees in Straw Skeps During Winter.*—I have recently bought two stocks of bees in skeps, and fear they are getting short of stores. Will you, therefore, kindly tell me how to make good the deficiency, and say what is the best way to feed them?—F. BAILES, Dunstable, December 10.

REPLY.—You will need first to make a supply of good, soft bee-candy. Having just procured a copy of the "Guide Book," it only needs to follow very carefully the directions given on page 165 to ensure the right thing. Bear in mind, however, that the candy must be soft, as bees will starve if the food given is made hard as a stone by overboiling. When prepared for use, a good-sized piece of the candy must be pressed into wedge-shape and forced into the skep at feed-hole, and carefully protected from bees outside by warm coverings fastened close down by strong wire-nails

pushed into the straw. Give a pound or more of candy at a time, and renew as often as needed. It might be well to send us a small sample of candy to be sure it is right.

[3629.] *Packing Section-racks with Chaff for Warmth.* — Will you kindly enlighten me on the following?—Mr. Povall, in B.B.J., October 20 (page 415), when explaining his mode of working for section-honey, says he "puts on one rack of sections," etc., and "packs down with clean chaff on all four sides and top of rack." In a few days "this rack is raised and others put under it, packing the whole with chaff." Will he kindly explain how to prevent the loose chaff from getting into sections unless covered with paper first? Also, how to keep it out of brood-chamber when raising rack for sections? Thanking you in anticipation, I send name, and sign—SUFFOLK, Colchester, December 8.

REPLY.—We will draw Mr. Povall's attention to your query, and ask for a word of reply in our next issue. No doubt he will be able to explain his plan better than ourselves.

[3630.] *Queen Cast Out in November.*—I am quite a novice in bee-keeping, having only started in the spring of this year with one frame-hive. But I have since added another, and am very much interested in the B.B.J., which I began taking at once, and am induced to ask your advice in the following difficulty: I am sending a queen bee, picked up yesterday in front of hive. There are also many young bees lying dead on the ground beneath the flight-board. The change in the weather of Thursday brought them out in hundreds. I should be glad to know (1) whether you think the dead bee is the parent queen or a late-hatched one? I feel very anxious to know if it shows that the stock is queenless. The bees were busy carrying pollen late in October. I have recently moved to another house a short distance away, but did not move the bees till November 23, when the cold weather had set in. I also enclose a couple of young bees, and would like to have some idea of their age if you can tell me. Any information you can give me will be esteemed.—E. F. ROSE, Sudbury, December 9.

REPLY.—1. The dead queen sent is an adult, and probably the parent queen of the colony. It is, however, just possible that the bees have deposed her, and raised a young one some time before the old queen was cast out of the hive. The only way to solve the matter is by examination of the combs—when a fine, warm day gives the chance—in order to see either a young queen or some remains of the cell in which a queen has been reared. The fact of pollen being gathered late in October points to brood-raising, but the difficulty arises from your lack of experience in judging of such indications as would explain matters. Have you no bee-keeping friend who would examine the combs and give his opinion? It is not unlikely that moving the hive may have had something to do with queen being cast out. 2. The couple of worker-bees are not young, though somewhat diminutive in size.

[3631.] *Wintering Bees Indoors.*—Since hiving, or rather "boxing," a swarm of bees that clustered on one of my apple trees last June, I have become intensely interested in them. I obtained a "Guide Book" (as advised by you when answering a former query), but owing to slackness in trade for many months past, I have been unable to afford a frame-hive, and I have, in consequence, left the bees in the sugar box in which I put them at the time. I bored several circular holes in the box sides, and glazed them over in order to watch the bees' progress as far as possible. I have been delighted and amazed at their wonderful work. The combs are built at one end of the box, taking up nearly all the width and about half its length. They are shaped something like a Rugby football, with one end cut off where it is suspended from the top of the box, and reaches almost the full depth. Early in October I made a case with a lean-to roof (which latter I covered over with thick American cloth) about a couple of inches larger than the box. I have tightly packed the space between with chaff, and made everything as snug as I could, and I also fed the bees with syrup—made according to the "Guide Book" recipe—by means of a 3-lb. jam bottle, covered with thick linen, inverted over a hole in the top of the box. From one of the observation holes I can see some sealed stores, whether syrup or honey I cannot tell, but I know that a goodly number of young bees were bred by the quantity of cell-cappings seen on the floor-board. I now feel far from satisfied with what I have done, fearing that I have made the following serious mistakes:—(1) Not feeding the bees as soon as housed; (2) not putting them in a skep, which my pocket might have run to had I thought of it, but I hoped to get a frame-hive for them; (3) by not putting a division-board in box in order to contract the space. In consequence of these omissions I fear the bees will not survive the winter, and want to know if you think I might bring them indoors when severe weather comes on like that which we have just experienced? It has occurred to me that as the bees do not appear to fly abroad in cold weather they might just as well be indoors, confined to

the hive. Your opinion and advice will therefore be greatly esteemed.—STREAMLET, Ilford, December 10.

REPLY.—If you can be assured that the bees have sufficient stores to last them till next March, the other omissions enumerated may be overlooked, except using any rough means that can be improvised for keeping the bees warm, apart from carrying them indoors during cold weather. The latter plan has often been tried, and as often ended in failure. If the box is protected against wet and packed as advised, there is no reason why the bees should not come out all right in the spring.

Echoes from the Hives.

Chichester, December 2. — Everything in the apiary having now become quiet, it gives one time to look around and to read up what other bee-keepers have to say. Unfortunately, the season of 1904 has been a very poor one in this part of West Sussex, as, indeed, it has been right away through the county, with few exceptions. I think it is about the worst in my twenty years' bee-keeping, and will make many, besides myself, hope that 1905 may not be a re-echo of 1904. I should think the idea of our friend "D. M. M." (page 425) with regard to picture postcards ought to catch on. Let us suppose that our Editors have a photo of my apiary, if this could be reduced to suit size of a postcard, with the name and address of apiary underneath, and at the back a printed "price list," with a margin to be filled in by the bee-keeper as to prices, this sort of postcard would go down all right with me. Could our Editors give the cost per gross?

[Whatever may be the outcome of the idea with regard to picture postcards for bee-keepers, it would be quite beyond us to undertake the printing of such as are intended for business purposes only. Orders for latter should be dealt with by printers only, they are no part of the business of Editors or publishers. But, in any case, we should say the cost of engraving a tone-block and printing such small orders, as two or three gross of cards would be a good deal higher than most people imagine. —EDS.]

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of November, 1904, was £658.—From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

BEE-KEEPING IN CALIFORNIA.

Honey production in California is an industry that is not usually given the consideration it should have. Beginning with the introduction of bees in the early '50's, down to the present time, we are able to see the wonderful development of apiculture in California. When J. S. Harbison arrived here with 110 colonies of bees in April, 1857, it was predicted that honey production would never pay in this State, but before he had been here very long he was besieged with orders for honey at a price of $1.00 to $2.00 (4s. to 8s.) per pound, and he sold a number of colonies, or swarms, for $100 (£20) each.

But to-day there is no region where one may go but he may meet with the sight of an apiary. It is safe to say that we have in this State at the present time about 4,000 bee-keepers. Apiaries consist, as a general thing, of 10 to 250 colonies, which is determined by the kind of "range" that is available. Quite a number of our bee-keepers have 1,000 to 1,500 colonies, and there is one who controls 8,000 colonies. It is estimated that there are about 300,000 colonies of bees in this State, in which there is invested the sum of $1.500,000 (£300,000), and there is an annual expenditure of $250,000 (£50.000) for supplies. The annual value of the honey and beeswax produced is about $1,250,000 (£250,000). The yield of California is about three times that of any other State in the Union, Texas being next on the list.

Honey is raised in many parts of the State. Not alone in the foot-hills where wild forage often affords the bees plenty of feed, but in the more cultivated districts where there are large alfalfa fields and where irrigation is most extensively practised.

For some few years past the matter of profits to the producer has been a serious question. Commission men and dealers have sought to make for themselves immense fees to the end that the producer got what there was left, which sometimes resulted in the presentation to the producer of a bill for freight after his entire crop had been consumed in the process of selling it. This has brought about the organisation of Honey-Producers' Associations, of which there are two in the State —one located in Hanford and the other in Los Angeles. The primary purpose of these associations is simply to provide a system by which a reasonable profit may be assured the producer and to look after the very important matter of distribution. While these Associations take the honey business out of the hands of the middleman, they work to the interest of the many producers as well as to the consumers.

Adulterated honey is being driven from the market, and, in fact, new markets are being created for California honey through the agency of these Associations.

With the continued development of the State's resources, the honey industry will continue to grow. California honey always has a separate and distinct quality from that produced in the East, and the more it becomes known to the Eastern consumer, the greater the demand for it. It may be said that the honey industry in California is yet in its infancy. — *For California.*

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

*** A bee-keeper, dating from St. Heliers, Jersey, writes:—Could any reader of B.B.J. give me the name of a good honey-plant or creeper to cover a wall-space about 30 ft. long and 10 ft. high. The aspect is south-west, and the wall only gets the sun about mid-day? If possible I would like a plant that would be ornamental as well as useful, seeing that it will be near the roadway and front of our dwelling-house; also, how many plants or creepers would be necessary to cover such a wall?

Alignis (Weston-super-Mare). — Candy-making.—While regretting our inability to supply the information you ask for, we do not think that a sugar-boiler's thermometer would be of any service in making soft bee-candy. If, however, you can oblige by sending a small sample of your friend's candy it would enable us to form a clear opinion on the point. With reference to the mention you make of "bread-knives with wavy edges" for uncapping combs, they have been tried long ago and discarded in favour of proper uncapping knives made for the use of bee-keepers.

Dadant (Bowness).—Size of American Frames. — The "Langstroth" frame measures $17\frac{5}{8}$ in. long by $9\frac{1}{8}$ in. deep. The "Quinby" (which is, we think, the one used by Dadant) is larger, being $18\frac{1}{2}$ in. by $11\frac{1}{4}$ in.

J. Parsons (Cheshire).—Buying Honey for Showing.—You are quite right in reprobating this dishonest practice. It is simply downright fraud to stage honey not produced by the exhibitor's own bees.

J. Boyes (Cardiff).—Prize-winning at Shows.—The question is too entirely a matter of "law" for us to decide; it would need a judge learned in the law who had heard the evidence. As a question of equity, however, it seems clear that if there are three separate apiaries, one owned by Smith, another by Brown, and the third by the firm of Messrs. Brown and Smith as partners, it appears to us while both Brown and Smith can exhibit and win prizes as single individuals in one class, the firm of Brown and Smith would not be debarred from winning in the same class. To do so would be to put the apiary jointly owned by that firm out of the competition in every class in which the partners exhibited singly.

C. Calvert (Glos.).—Expert Certificates.—If a member of the Bristol, Somersetshire, and Gloucestershire B.K.A., you should write the hon. secretary, Mr. Jas. Brown, 31, Bridge Street, Bristol. Non-members of a County B.K.A. must apply to Mr. E. H. Young, Secretary B.B.K.A., 12, Hanover Square, London. We will be very pleased to get interesting news of bee-keeping in your county for publication as promised.

A. L. Plumbridge (Kent).—Raw Sugar for Bee Food.—Raw sugar can be had from any grocer, but "Porto Rico" sugar is difficult to get. On the other hand, raw unrefined sugar of any kind is entirely unfit for making either bee candy or syrup-food for bees. Our advice is to use only refined crystals of pure cane sugar. The yellow crystals (Demerara) do very well for spring food; but loaf-sugar is best for candy-making, and white crystals for autumn feeding.

Honey Samples.

B. E. Buckwell (Acton, W.). — Sample shows no trace of lime honey. There is a trace of heather flavour in it which gives it a distinctive character. We never hear of honey from pine trees in this country.

Amateur (Knaresborough, Yorks). — Sample is of good quality, but rather dark in colour. Though partly from clover, its characteristic flavour is from an admixture of heather-honey, which is, to our mind, its best point. In fact, it is the blend of clover and heather we like in a honey for table use.

*** *Several Letters and Queries are unavoidably held over till next week for lack of space.*

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

Last week we alluded to an attack made by the editor of the *Irish Bee Journal* upon the B.B.K.A in consequence of what was said by its Chairman at the meeting of delegates of County Associations on October 6. Pointing out the failings of a contemporary is not a pleasant task, but our duty is plain, and we hope to show that the writer's criticism is not justified and is unfair. The Chairman in his address had stated that "the Irish Bee-keepers' Association, once a powerful one with a large membership, had, he understood, dwindled down to about one hundred members, so it was not surprising that it has little influence in the present effort for legislation."

This statement has called forth the wrath of the editor, who says he is "not concerned to defend the I.B.K.A. from a sneer at its want of influence." Yet he tries to defend it, with, of course, a sneer in return, for he says: "What it has been able to accomplish for the industry in Ireland, beyond anything yet attained in England, is sufficient testimony to its influence." We, however, maintain that this influence was in the past. There is no question that at one time the Association was very useful and was doing a good work, but the policy pursued during recent years has been anything but conducive to its welfare. It may not be generally known that the Irish Bee-keepers' Association owes its origin to the B.B.K.A., for in 1881 this Association sent, at its own expense, two of its members, Messrs. C. N. Abbott and Wm. Carr, with its bee-tent to attend various agricultural and horticultural shows in Ireland. Such practical demonstrations in modern methods of bee-keeping and manipulations with live bees, as were then given, had never before been seen in that country, and the visit aroused great interest in the pursuit. Bee-keepers were sought out and urged to form an association. As a result, on March 12, 1881, the County Armagh B.K.A. was formed; and about a month later the Irish B.K.A. came into existence. Both associations adopted the rules of the B.B.K.A., and were given every assistance by that body. In 1887 Mr. H. Chenevix, J.P., was hon. sec. and treasurer, and continued for thirteen years as the leading spirit in the I.B.K.A. Indeed, it was largely owing to his energy and influence that it prospered. He started a leaflet, "Notes and Hints," which was supplied free to members, and it was also through his influence that the Congested Districts Board was first induced to make a grant towards bee-keeping in the districts under its care. The resignation of Mr. Chenevix was a severe blow to the Association, from which it has never recovered, and in recent years it has been sailing in troubled waters.

The editor of the *Irish Bee Journal* tells us that "the membership of the Association for fourteen years ranged from 60 to 120," but we find it numbered 128 in the first year of its existence, and in 1895 there were 169 members. Then he says: "It reached 334 after the remarkable honey season of 1897, but after the bad season of 1898 it fell to about what, following three unfavourable seasons, it stands at now." He then takes the last report of the I.B.K.A. for 1903, and sets down the number of members at 126; then leads his readers to understand that the membership has stood at about this figure since 1898. But in looking over the reports of the I.B.K.A. we find that in 1901 there were 178 members, and a year later the membership reached 182. In 1903, however, the numbers, owing to the policy pursued, had dwindled to 126, although in February of that year the editor had stated that there was "a total membership of nearly 300." If the leakage has been going on at the same rate since the beginning of the present year, it is not unreasonable to suppose that the membership had fallen to "about 100 members"; nor should we be surprised to hear that it was now even below this number. Now, in view of all this, what does the editor do in his endeavour to disparage the B.B.K.A.? He takes the last annual report (1903) and states that it has a total membership of 332. But these figures do not suit his purpose, so he deducts the affiliated associations and what he calls "non-subscribing subscribers," and in this way reduces the numbers by 102, leaving the B.B.K.A. with only 230 members. This is a misleading and most unfair way of putting it, but no doubt it is done with a purpose. It so happens that the I.B.K.A. also had affiliated associations in its list at one time, and we find twelve such in 1901, but in the last report for 1903 they seem to have dwindled to two! Small wonder therefore that the writer is anxious to exclude them from the calculation. But why exclude the 28 county associations from membership of the B.B.K.A.? They not only pay their subscriptions, but take part in the management of the parent association, being entitled to a seat on the council. Then we come to what are termed "non-subscribing subscribers." By these he evidently means members whose subscriptions had not been received when the accounts were made up. But why exclude these, seeing that most

of them would send their subscriptions on noticing a blank against their names? The council treat the members with courtesy, do not make them pay in advance, and have confidence in their intention and ability to pay. Nothing is lost by courtesy, even in business matters. The editor then goes on to say: "The B.B.K.A., as to its life and subscribing members, is not double the strength of the I.B.K.A." We, however, see no justification for these deductions or for the attempt to reduce the membership below 332. We contend that the strength of the B.B.K.A. is not only more than double, but that it is infinitely greater than its membership represents. The county associations which it has brought into being, and for whom it exists, constitute the main source of strength to the B.B.K.A. The parent association does all it can to strengthen its affiliated societies, even to recommending applicants to join the local association, if there should be one in their county. Instead of having district secretaries of its own who would no doubt materially add to its membership, it has encouraged the formation of county associations. The B.B.K.A. has in this way accomplished a work in the promotion of the bee-industry throughout the country which it would have been difficult to have achieved without its aid, and in consequence has made its beneficial influence felt.

The editor of the *Irish Bee Journal* also goes into an elaborate argument based upon the population of the two countries, and says that "if the B.B.K.A. were as representative in Great Britain as the I.B.K.A. may claim to be representative in Ireland, the B.B.K.A. membership ought to be 8¼ times that of the I.B.K.A., or 1,040. It is only 230." It is not difficult to show that its membership, and that of its affiliated associations—which are inseparable from it—is a great many times more than the figures stated, some of the associations numbering considerably more than 600 members.

The I.B.K.A. has recently made alterations in its rules, which preclude it from being any longer considered as a representative association. Membership depends on the will of the committee, and only those whom they select are admitted. County associations have been excluded by the insistence of delegates living in the counties. The experts also must be members of the association, and are included in the 126. But no account is taken of the 836 certificated B.B.K.A. experts. And when we consider what has been done even in the way of examinations only, it seems absurd to make the comparison. What other but the B.B.K.A. could have held simultaneously in different parts of the country examinations, as it has recently done, where no less than 36 candidates for the second class certificate presented themselves for examination, and underwent the necessary test?

A better idea of the relative strength of the associations can be gathered from their respective accounts. Taking the last published account, we find that the income for 1903 of the I.B.K.A. was £35 4s. 1½d., and of this sum no less than £12 3s. 7d. (or more than one-third) goes to the editor of the *Irish Bee Journal*, principally for advertising, so that there only remains £23 0s. 6½d. for the I.B.K.A. to work with. Now in 1901 we find the total income was £120 15s. 4½d., the President of the B.B.K.A. contributing £10 towards the funds, and the Congested Districts Board contributes £20 towards the publication of the *Irish Bee Journal*.

On the other hand, let us see how the accounts of the B.B.K.A. in 1903 compare with those of the I.B.K.A. The income of the former in the same period amounted to £441 11s. 11d., and there was not a penny expended on advertisements. Nor should it be forgotten that an amount equalling the affiliation fees of all the county associations added together, was given in prizes for honey, etc., in the county competitions at one show held under its auspices. Here then we find the strength of the B.B.K.A. not only, 8¼ but 19 times as great as that of the I.B.K.A.

We have in the above shown the fallacy of the arguments of the writer of the "editorial," dealt with, and in future we hope to show what has brought about this peculiar state of things and why the association is no longer the representative of Irish bee-keepers.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

AMONG THE BEES.

THEOLOGY AND BEES.

[5722.] Theological discussions are inappropriate in the pages of the B.B.J., and I must respectfully decline to enter into any such, although a recent communication (5713, page 484) opens up a wide field.

I look, however, upon your reverend correspondent's criticisms as merely illustrating the point of view of the pulpit and the pew. We, sitting down below, have no less reverence for sacred things, but when expressing it we are not so profuse in the use of the name and attributes of the Deity; and this is, I think, wise in

so technical a journal as ours. Viewed thus, the differences between "W. H." and myself are greatly minimised, at least. His chief "points," I think, number five, and I will very briefly deal with each. 1st. "I glorify the creature at the expense of the Creator." To this I reply: In glorifying the creature I most distinctly glorify the Creator. That is sound theology from a layman's point of view.

2nd. "I leave God out of sight." I might resent this statement, but I will merely refer my critic to the early part of my first article (page 441), where he can read for himself, "Some wiser Guide directs these wise creatures, etc."

3rd. I am supposed to have ignored the "infallible word of God," whereas, in Part 2, I went as near quoting scripture as I ever did writing to a non-theological newspaper, as the first sentence in paragraph 4 is almost a direct quotation from Genesis.

4th. The question of "evolution" was scarcely dealt with in my articles, and I made no reference to the "survival of the fittest" or any other Darwinian "theory." The attack on M. Maeterlinck does not concern me, but I think both of us might make very short work of some of our critic's assertions.

5th. Quoting "W. H.," "I am one of those who refuse to allow" that, although all creatures created were declared good (not "very good"), matters were left in such a way that the scheme provided no room for improvement, so that they might become "very good." Herein, I think, alone we differ.

Clearing Supers.—Replying to the inquiry on page 460, I may say my system of clearing out bees from surplus-chambers without the use of a clearer is as follows:—I lift full rack in super clear of frames, or other surplus boxes, and place quilt neatly down over these. I then lay full super above quilt, with its top uncovered, replace roof-piece with all cones or ventilators darkened. In hives of the "W. B. C." type I give a bee-space in front, between body-box and outer case, or pierce a small hole in projecting front of brood-chamber to act as an escape. The bees in the super, finding themselves cut off from communication with their fellows, leave the honey-receptacle, and scatter about seeking an exit. Very quickly this is found, and at a given signal every single head is found pointed towards the "escape," and a perfect stampede takes place, with the result that the supers are soon cleared, and every bee has joined the incoming field-bees in the brood-chamber. In hives of the "combination" type, the same end is secured by raising the back dummy a bee-space above floor-board. Bees, I think, clear out quicker in this way than either through a cone-clearer or a "Porter escape." In favour of this plan it may be set down that it is cheap, easily applied, and almost always at hand. It is most satisfactory in doing efficient and expeditious work in harvesting honey clear of bees, and I have never known it fail.

Agricultural Produce Rate.—In desiderating a prominent printed label containing these words, it was not suggested that its use was a necessity, but it would certainly be a very great convenience when forwarding consignments of honey with carriers. Busy railway porters so rarely read instructions, often indistinctly written in the corners of an otherwise well-filled label, that our honey is frequently despatched at the ordinary full parcel rate, and we or our customers mulcted in considerable sums. A prominent label would save this. That is all I meant. Further, in regard to the carriage of honey at this reduced rate, I give the following official pronouncement from the Superintendent of our northern railway:—

"Honey when consigned at owner's risk by passenger train is charged under the owner's risk scale of rates, which is equivalent to about half the ordinary parcel rates, delivery included within the free delivery boundary, where there is a carting staff. The reduced rates apply both in Scotland and England, but the signing of a 'risk-note' is an indispensable condition upon which the rates will be applied." The Companies intimate that honey in sections, packed in boxes, is only accepted at owner's risk. I think this lucid explanation covers the ground. The table of charges enclosed with above is very reasonable, and somewhat similar to those lately appearing in JOURNAL, so I need not waste space in reproducing.

The Dying Year.—Never before, perhaps, has apiculture been in such high favour; never, hitherto, has it bulked so prominently in public notice; never have bee-keepers been more enthusiastic; and, certainly, never have they had a better opportunity of getting their apiaries into winter quarters in finer order than in this year, so soon to be numbered with the dead past. The outlook ahead is therefore of the brightest, but whether our rosy forecasts will be realised, only the future can tell. I will conclude my last contribution to Vol. 32 by wishing all readers the compliments of the season and a record honey year in 1905.—D. M. M., Banff.

"A WELL-APPOINTED COMMONWEALTH."

THE THEORY OF EVOLUTION.

[5723.] If the arguments Mr. Farmer uses in his comments on my article (5719, page 494) satisfy his own mind, well and

good. They do not enlighten or satisfy mine. Further, the meaning he evidently attaches to the word "evolution" is certainly not that which is generally understood by the term. He speaks of the results of "crossing" as the produce of evolution, for instance, in the numerous varieties of the apple. Would he allow that a "mulatto" was produced by evolution, or a "Eurasian"? If not, why not? The process, so far as Nature is concerned, is identical. He airily tells us that "the vast number of varieties of the apple have been evolved from the almost useless wild fruit known as the crab-apple." This is assuming what needs to be proved. It is all very well saying "These are facts easily proven;" what I ask for is the *proof*, and not merely the assertion And so in regard to bees. He says: "The Italian and Carniolan bees, no doubt, came from the same source as our English bee." Well, they may, or they may not, have done so. His *assertion* that it was so is not *proof*. Mr. Farmer's definition, or perhaps I should say explanation, of the "theory of evolution" is that it means "that everything was not fashioned exactly as it exists to-day, but that it has been evolved, or developed, to its present state." No one will take exception to this statement if properly safeguarded by allowing the active and continual agency of God in directing the evolution; and this is just what so many followers of Darwin do not allow, though the wiser of them are beginning to recognise that the facts of the case are against them, and they are more and more being driven towards the "theory" as revealed in the Scriptures of Truth. I am glad to see that in regard to "origins," at any rate, Mr. Farmer is not a Darwinian. He allows that the Creator did "make the apple," though "not perfect to begin with," he says. Well, I differ with him as to the result of God's handiwork. I believe *it was perfect* until the "curse" fell upon the whole creation, and that its "crab" state was the result of deterioration, and further that its improvement is a partial removal of the curse as the reward of man's labour and pains.

I maintain that Genesis i. gives us the true account of the "Origin of Species," and that, *in view of modern "science"* (?), we are there told ten times over that God made them "*after their kind.*" From those original stocks varieties have been developed by the agency of the Creator acting either directly or through environment and other modifying causes. If we use the term "Nature" as a "convenient term to include everything" when speaking of operations of which we understand so little let us at least, when we begin to award praise, not lose sight of the One to Whom alone any praise is due. "Laus non Naturæ sed Deo!"—W. H., Brilley, Whitney-on-Wye, December 16.

EVOLUTION.

"A WELL-APPOINTED COMMONWEALTH."

[5724.] The criticism of "D. M. M.'s" article, headed as above, by your correspondent "W. H." (5713, page 484), carries very little conviction to many of those attached to this planet. He appears to forget that we have the power to discern the cause of things, and by this power to control our destiny; for exception is taken to the Darwinian theories, evolution is ignored entirely, imagination and reason in others are meted with contempt. "W. H." cannot agree that in all inquiries we must proceed from the known to the unknown and seek the explanation of such remote matters as we cannot directly experience by the help of others close at hand, of which such experience is possible. Indeed, he argues the reverse, and even ventures an hypothesis: "The instincts of the bee are God-given." I would ask: (1) Is the bee's propensity to rob "God-given"? or is conscience the evolution of experience? (2) Does not Nature alter the instincts of bees exported to lands where there is practically a honey season all the year round? (3) Is it not by hereditary instinct that the most prolific queens are obtained from our strongest stocks? If bees are of a milder disposition when located near a thoroughfare than when not in contact with man, and that the effect of the smoker causes a certain condition to arise, one is apt to ask—Why is this? Also, why is it that the quantity of nectar gathered under man's guidance is in excess of that without his interference? Surely these are instincts due to "contact with man"! Has the bee the reasoning faculty—inference from past experience? Their actions prove they anticipate the presence in objects of characters and tendencies to action, as yet unperceived from signs the presence of which they actually cognise. This is the guiding of conduct by a foreseeing preparation for the future due to a recollection of the past. But we do not know what wisdom or skill the bees are endowed with now, much less go back to the beginning. We do not know that everything made was "very good" to the extent that a part of everything has evolved something very bad; that is why degeneracy is deplored, and is met by the law of the "survival of the fittest."

Darwin's theories are, I think, generally accepted by men of learning as being true in principle and capable of proof. Can "W. H." say the same of his theories? For my part I am content to believe in what is known and can be proved, and to

think and reason for myself. I send name and sign—T. W. S., Lincs.

[We have—after some revision—inserted the above, but it is now time to remind readers that theological discussions are unsuitable for publication in this JOURNAL, and the correspondence must therefore now close.—EDS.]

A CHRISTMAS HONEY-CAKE.

Most readers will probably remember the description, given in "Homes of the Honey Bee" on November 17, of the apiary at St. Mary's Abbey, Devon, where bees have had a "home" for over a thousand years. It was, therefore, with much pleasure that we received a photo of a Christmas honey-cake so altogether unique in its way that we reproduce it on this page, as appropriate to the season, and as showing the venerable Abbey itself in the background.

The "cake" seen is three feet high, and its form, as seen, needs no description from us, beyond saying that it was made by Brother Colomban, the Abbey apiarist, who is not only a capital bee-keeper and honey producer, but makes by far the best honey-cakes we ever tasted. And we venture to say that our opinion would be endorsed by every one who has the pleasure of partaking of the "cake" here illustrated when it is cut up for eating, as we expect it will be.

A Unique Christmas Honey-Cake.

FOUL-BROOD LEGISLATION.

THE VIEWS OF LARGE BEE-KEEPERS.

[5725.] When reading Mr. W. Woodley's "Notes by the Way" on page 492 of last week's issue I could not refrain from the quotation that "a man's foes are they of his own household." Mr. Woodley, as all who read the B.J. are aware, was—by virtue of his position as an ex-officio member of the Council of the B.B.K.A.—at the instance of a large majority of those attending the special meeting at Jermyn Street on October 6, elected a member of the Committee to draft the Foul Brood Bill. He was no doubt placed then in a position to bring forward the views of his friends, and was in honour bound to do so. He did not attend the monthly meeting of the Council on November 24; nor did we hear that he had sent any written statement of his objections to the work in hand when apologising for non-attendance. Had he not neglected his plain duty the Committee would have been in possession of the information "from data to hand," respecting the wishes of "nearly all the large bee-keepers and honey-producers in England," and could have acted on it. But there is still time to bring it before us, and it would be gladly received. Surely the phrase "nearly all," etc., is a very wide one; it reminds one of the schoolboy who said he had seen forty thousand black cats in the

backyard, and, after criticism, reduced his statement to "our black cat and another." I am sure our Editors would gladly give room in your columns to a list of, say, one hundred only of the names of bee-keepers of twenty-five stocks and upwards who are in opposition to the Act. Mr. Woodley is also unfortunate in his choice of a simile. What sane medical officer would cast aside the beneficent Vaccination Act because he can no longer compel the conscientious objector? In like manner sane bee-keepers are asking the protection of a "permissive" Act towards which Mr. Woodley is playing the part of conscientious objector. It seems altogether to have escaped his notice that the whole working of the Act will turn upon the bye-laws drawn up by the county councils who will put the Act in force. Mr. Woodley will be doing yeoman's service to bee-keeping if he will draw up a set of rules embodying his experience of what an expert should do in visiting (a) an apiary in good order, (b) an apiary containing disease; instead of wasting his ink in vague statements.—T. I. Weston, Vice-Chairman, B.B.K.A., December 19.

RE FOUL BROOD AND INSPECTION.

[5726.] Every bee-keeper in the land ought to wish success to the Bill, providing only that the owner of hives is not subjected to merely prying visits. But really I think no apiarist need fear a visit from the inspector, unless he has some foreknowledge of his presence being necessary. Some of us may not fear the disease in the least, but it is certainly unpleasant for the expert to have careless neighbours keeping diseased bees around him, and for the uninitiated it is disheartening and absolutely ruinous.—Samuel Simmins.

THE PROPOSED FOUL BROOD ACT.

[5727.] As a bee-keeper, may I request information on the following points from the authors of the proposed Foul Brood Act? (1) On what grounds a bee-keeper in Great Britain or Ireland is subject to penalties for selling diseased bees, while the importer of diseased bees from abroad is not touched by the proposed Act? (2) Why it is not considered necessary to give county councils power to destroy wild bees in houses, trees, etc.? No doubt there may be good reasons for omitting clauses dealing with the above, but I think that the authors of the proposed Bill should, if they wish to strengthen their hands and get county councils to support it, take bee-keepers into their confidence, and explain, through the medium of your valuable Journal, why these points are not dealt with. As a gentleman who has considerable influence in this district remarked to me recently, it will cost the county £150 a year to carry out the proposed Act, and it will be money wasted if it remains legal for any one on paying 5s. to introduce a diseased foreign queen into the county.

I may point out in view of the above, that it is one thing to get the Act passed, and quite another to get county councils to put it into force.

Supposing the 120 counties in the United Kingdom and Ireland spend on an average £100 each in carrying out the Act, it means £12,000 a year out of the ratepayers' pockets, and it seems reasonable that, in the face of this large sum, there should be some prospect of stamping out the disease, which, so far as I can see, at present does not exist under the proposed Bill. I send name and sign—A County Councillor, Dumfriesshire, December 15.

OPPOSING LEGISLATION.

[5728.] I always feel uncomfortable about a person who swallows anything that may be offered, on the lines of "Shut your eyes and open your mouth, and see what I will send you." And it makes me even more uncomfortable to find a man in Mr. Woodley's position and circumstances taking up a position that is generally supposed to be left behind in childhood. Indeed, the closing paragraph of his letter might be paraphrased thus: "I have always had my own way, and I always will! If I cannot do as I like, I will make things unpleasant for some of you, and will get the other boys to help me."

In making the clear statement that he has not been troubled with foul brood in his apiaries, Mr. Woodley—in effect—admits that his knowledge of this disease is theoretical only. My own knowledge and experience, too, is unfortunately of the practical kind, and I ask if Mr. W. Woodley will still refuse to have his liberty interfered with, no matter what the cost may be to others? I can tell Mr. Woodley that if he at some future time should have an outbreak of foul brood within a mile of his apiary of the virulent type that we have had here, the disease would in one season play havoc with and greatly reduce the hundred stocks that he appears fearless of being able to make disease-proof against foul brood.

Mr. Woodley again refers to the possibility of bee-pest being spread by experts. On this point I would only say one of my reasons for welcoming legislation is that all concerned would be made to feel their responsibility, and the expert would no doubt forfeit his certificate if reported for negligence.—W. Loveday, Hatfield Heath, Harlow.

BEE-KEEPING STATISTICS.

[5729.] Mr. Woodley, in "Notes by the Way" (p. 452), calls on me to withdraw a statement, as reported in B.B.J. of October 27 (p. 423), regarding the action of the Berks. B.K.A. Sorry I cannot oblige. I am well aware of what was done in the matter referred to, and my remarks at the conference were in accordance with fact; but, whilst the abbreviated report somewhat misinterprets what I did say, still, I do not think it bears the construction Mr. Woodley has chosen to put upon it. I said that "the statistics then obtained were unreliable and unsatisfactory, and that to get reliable statistics entails a cost which the value of the acquired facts does not justify."

Whilst Mr. Woodley has been earning his bread and butter by staying at home and producing honey to spread on the "staff of life" of others, I have been earning mine by getting about the country and, *inter alia*, compiling statistics, and proving the unreliability of those gathered in the manner he indicates. Information gathered in the village school is useful as a rough basis to work on, but I have long ceased to regard data so obtained, or obtained by hearsay, other than as of very dubious value for the compilation of returns which are required to be more than very, very approximate. Further comment will perhaps be needless when it is said that the Council of the Berks. B.K.A. (on which I have the honour of serving along with Mr. Woodley) has not thought fit to repeat the experiment.—H. EDWARDS, Sunningdale, Ascot,

PASSING THOUGHTS ON "THE BEES."

[5730.] Winter now being here in grim reality, the best thing for all bee-men is to turn their thoughts to greener fields and summer days. Thinking that possibly you might find these notes and thoughts of sufficient interest to place before your readers, I have ventured to send them on. If you do not—well, Messrs. Editors, there is the ever-ready w.p.b., and we shall still be friends if they arrive there.

Queen Rearing.—"Swarthmore" and "Doolittle" Methods.—I have been experimenting with these during the past season, and must say that, under proper conditions and with requisite care, splendid cells may be raised in supers by either method. I have used both the "Swarthmore" cups and the "Doolittle" dipped cells, and while the results seem to be about equal, I think my bees had a slight preference for the dipped cells. Each method, however, has its own particular advantages.

My usual custom has been to confine the bees from about four frames in a ventilated box, giving them the larvæ after a lapse of about six hours. Twelve hours later the started cells were placed between brood frames in supers, and over excluder zinc. This seems, and no doubt is, very simple; but it is surprising what a slight error will cause utter failure. My first attempt gave me one cell out of twelve cups, and I shudder to think how long the cell-grafting took me. My last trial gave me ten splendid cells from twelve cups, and from first to last the time occupied was ten minutes! It is practice makes perfect in this work. Our failures are branded in the mind, for one usually has to pay for each.

As a hint or two for anyone who wishes to try these methods I would say: (*a*) The super must be packed with bees and the cells placed between brood frames raised from the body-box; (*b*) There must be a light flow of honey or you must feed. Fail to do this and your cells will vanish.

Taking Bees to Heather.—Is it not possible for more advantage to be taken of this important honey harvest. I mean by those located some distance from the heather. We hear of our Scotch and North of England friends associating for the purpose, chartering vans from the railway companies, and, in addition to having an enjoyable trip, securing sufficient honey at least to pay expenses. Are we less enterprising than they, or what?

Foul Brood.—With regard to this, your contributor, "D. M. M.," in effect says:—What bee-keeper will assert that a diseased stock, which has been condemned, is worth *anything?* For myself, I say, pay. Pay by all means, if by doing so you can get an Act passed which will compel obstinate bee-keepers (save the mark!) to keep their house in order and prevent them from being a standing menace to their neighbours. After all, it seems to me much the same thing as paying a smallpox patient to grant the favour of allowing you to cure him! I send name for reference and sign—JOHN O' GAUNT, Leicester.

BEE NOTES FROM HAMPSHIRE.

[5731.] I am sending a packet of "Chapman Honey Plant" seed to help in filling the envelopes of applicants. But for the boisterous weather of late, which has beaten it out of the pods, you might have had a gallon of seed, as on some waste land near by I have had the plants growing like a copse. I would be very pleased to send a few young plants for blooming next summer to any bee-keeper wishing for same on the latter paying carriage.

My bees (50 stocks) came through the winter of 1903 in perfect condition. I

always pack them down with 20 to 25 lb. of food (gathered by the bees whenever possible) in brood-chambers. This has been a very poor honey season in our part of Hants, my average take of surplus being only about 20 lb. per hive. Every one, however, is hoping for better luck in 1905. But as we cannot have everything our way, we must be content that it is no worse, or we might become quite thankless.

Foul brood I am not troubled with, thanks to keeping my hives dry, well ventilated, and regular "spring cleaning." I find that all stocks left with shallow-frame racks on during winter come out far the best in spring, and I offer this hint to all brother bee-keepers who have not yet tried this plan. Wishing all the compliments of the season to Editors and readers, and a good honey-year in 1905 —F. MOWER, St. Cross, Winchester, December 13.

CONTROL OF MATING.

[5732.] Can Mr. W. Loveday or any other experienced bee-keeper tell me how to control mating by selected drones? My own experience is that drones and queens fly a long way, and queens of one apiary are mated with drones from another. Even in September last I had several Italian queens mated, and not one of them pure, although I had an Italian stock teeming with drones at the time, and no other drones of my own stocks left alive, so that by some means they found native drones to mate with. I raised several batches of queens last summer, both Italian and natives, when none of the latter were flying, but all the Italian queens mated with native drones. On the other hand, a few of the native queens mated with Italian drones, but the majority of them found drones of their own variety to mate with. The nearest bees to mine are located about two miles away.

I do not mean to say that mating cannot be controlled, but should like to know how. The best strain of bees I can get is a cross between Italians and natives. They far outstrip either kind in a pure state, being more vigorous, and to my mind better disease-resisters. I send my name and sign—NOVICE, Glos., December 19.

"OWNER'S RISK."

A LEGAL DEFINITION.

[5733.] Respecting Mr. H. Newman's query (3620, page 479) as to the legal definition of "Owner's Risk," perhaps the following extract from J. W. Gray's "Brief Digest of Law" in his Railway Rates book will help to make the matter clear. In the case of "Robinson v. Great Western Railway" it was decided: "A contract to carry 'at the owner's risk' (apart from other special conditions) exempts the company from the ordinary risks of conveyance over the railway, but not from liability for negligence, delay in delivery, etc."—D. R. GRIMSHAW, Manston Apiary, Cross Gates, Leeds.

A BEE-NOTE FROM RUTLAND.

[5734.] To-day being beautifully fine and mild, the bees were having a wholesome cleansing-flight, but I am sorry to say that I have seen the blue-tits very actively at work decreasing the bee-population. I think that letter of Mr. Woodley (5716, page 492) in last issue explains the views of a good many bee-keepers. There are scores of old skeppists who have never heard of the proposed Foul Brood Bill, and a goodly number that have never even heard of foul brood. In some districts there are as many colonies of bees in old trees and roofs of houses as there are in hives; so what would be the good of a Foul Brood Bill in such districts unless as affording a nice job for the experts. I send name and sign—W. A., Uppingham, December 18.

REVIEWS.

Messrs. A. and C. Black, London, publishers, have sent us for review:

Who's Who for 1905. Price 7s. 6d. net.—This well-known reference book contains over 17,000 biographies, and in addition to being a valuable record of the lives of prominent men and women of the day, is full of valuable information indispensable to both the business and literary man and woman. The work has grown since last year and 96 extra pages have been added, and there are few books which have so much useful information crammed into 1796 pages as this one. It is certainly the cheapest and most useful book of the kind published, and we have much pleasure in recommending it. We should certainly feel at a loss without it.

Who's Who Year-book, 1905. Price 1s.—To all who possess *Who's Who* this year-book is indispensable. It includes the tables which formerly appeared in that book, and which were crowded out by the increasing number of biographies. It contains all that any one ordinarily wants of information such as is found in expensive publications, as well as original tables appearing nowhere else. Among the contents are tables of pseudonyms, peculiarly pronounced proper names, societies, Ambassadors and Ministers, Government officials, Press, etc. A new feature is the addition of tables of leading London specialists, and of great London preachers of all denominations.

The Englishwoman's Year-book and Directory, 1905. Price 2s. 6d. net.—This is another of Messrs. Black's useful publications, and should be in the hands of every woman who takes an interest in the education and progress of womankind. Many busy women have had their work lightened by the possession of this handy book of reference, and the highest praise is due to Miss Emily Janes, the organising secretary to the National Union of Women Workers of Great Britain and Ireland, for the great care with which she has compiled this work. One has simply to turn to its pages to learn what Englishwomen are thinking and doing in regard to subjects that are interesting the world generally. Those interested in bee-keeping will find that this is taught at Swanley Horticultural College, the Edinburgh School of Gardening for Women, and Lady Warwick College. Among the subjects treated we find education and professions, industrial, medicine, science, literature, art, and many others. Every woman wishing to prepare for earning a living or selecting an occupation would certainly do well to study this book.

Queries and Replies.

[3632.] *Giving Candy in Winter.*—When I covered up my only stock of bees this autumn, the hive contained six frames nearly full of what I took to be honey, but from careful perusal of your paper I have doubts of its being altogether such. I therefore ask: 1. How can I insert candy without chilling bees, as their outer covering at present is a bag of cork-dust, which seems (as far as I can tell without lifting) waxed down to the frames? 2. Also, is it essential to have a way for bees on top of frames under the covering? I send name and sign—NOVICE, Coventry, December 14.

REPLY.—After preparing a good-sized cake (say, 2 lb.) of soft candy, and pressing it into mound-shape—i.e., raised in centre and thin all round the edges, choose a warm day and lift off the bag of cork-dust, then place candy right over the cluster of bees. Replace the bag as soon as possible, using a little smoke if needed, to drive the bees down, and cover all up warm and close. 2. Not in your case; the bees will make a passage-way for themselves as candy is consumed.

[3633.] *Bees Short of Stores.—Finding Queens.*—May I ask the favour of a reply to the following queries? 1. As I was away during the summer I employed a man to take the honey from my hives, and on a recent examination I find there is not enough food left to last the bees through the winter. Can I continue feeding with candy indefinitely? 2. I find that the combs in the centre of one hive have broken away from the frames, and are lying in a mass on the floor-board. Should I remove this now and give fresh combs already drawn out, or wait until warmer weather? (There do not appear to be more bees than would cover three frames.) 3. How is a novice to set to work to find the queen-bee when a suitable opportunity occurs? I send name, etc., and sign—INEXPERIENCED, Borstal, Rochester, December 17.

REPLY.—There is no alternative if food is short; but the candy must be well made, and given in good-sized cakes weighing about 2 lb. 2. The sooner the broken comb is removed the better, when a warm day comes round. No need, however, to replace the broken comb when there are no bees to cover it. 3. Full directions for finding queens in hives are given in "Guide Book" (page 129).

Echoes from the Hives.

Romford, Essex, December 16.—To-day there was a sharp rise in temperature here, the mercury at noon having reached 57 deg. in the shade. A beautiful spell of sunshine of two or three hours' duration brought the bees out in grand style; the first flight since December 1. Opportunity was therefore taken to raise hive roofs and withdraw entrance slides, a thorough airing of hives being considered quite essential at this season of the year.

Referring to the past bad season in Essex, I have just heard from a bee-keeper in the Ongar district who states that 1904 was the worst year he has ever experienced in his ten years of bee-keeping. Only 90 lb. of honey from eight stocks, and, worse than all, foul brood in two lots! The outbreak (which has been traced to a driven lot of 1903) resulted, after every effort had been made to effect a cure, in the destruction of both the affected lots of bees and combs. This incident is rather disquieting to purchasers of driven bees, and particularly to those who, like the person above, always take the trouble to medicate regularly, and exercise the most scrupulous care in general cleanliness.—R. J. T.

Maidstone, Kent, December 14.—Though not well situated as regards bee-forage, I have a couple of frame-hives this year for

a start. One is stocked with a May swarm, the other with two lots of driven bees united. I have also a copy of Cowan's "Guide Book," and followed instructions contained therein most successfully up to the present time. Will let you know next season's result when the time comes. With the season's greetings to our Editors and readers—H. Howes.

Hatfield Heath, Harlow, Essex, December 19.—It is both useful and interesting to observe how the trees and plants watch and wait, as it were, for opportunities for development, though the energies of these things, like those of bees and of men, are liable to be nipped in the bud. I saw yesterday a gooseberry tree that has already unfolded young leaves on the sunny side, and a neighbour pointed out that the little gooseberries could be plainly seen among the leaves. Violets are plentiful on the plants on warm borders. Some good trusses of flowers of the polyanthus are also to be found, while the strong growths from the crocus bulbs, and thousands upon thousands of dangling hazel catkins, along with many branches of the palm-willow, clothed with plump brown-coated buds, are evidences that, like the bees, and for the bees, these are only waiting for opportunities to fulfil their mission.—Wm. Loveday.

PRESS CUTTINGS.

LOVERS' ORDEAL.

Suitors for the hands of the fair country maidens of Lower Austria are subjected to a curious ordeal. Before he is accepted a young man has to stand open-mouthed near a hive of bees. If the bees are not attracted by his breath he is accepted as being no drinker.—*Daily Express.*

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

*** The "*Yellow Flower.*"—Mr. J. Hamilton, Holywood, Belfast, kindly sends the following note regarding the above: "Referring to the letter of Mr. J. M. Hooker in B.B.J. of November 24 (page 463), on what is known in America as the 'Yellow Flower,' in the 'Flora of N.E. of Ireland' I find the following, which I take to be the plant mentioned: 'Bidens, Linn., Bur Marigold, *B. tripartita* grows in boggy places and ditches (rather rare); *B. cernua*, marshy places, but not rare.'" We may add a line to the above to say, the Dictionary of Gardening—to which we have referred—describes *B. tripartiti*, and also *B. cernua*, as "natives of Britain," and, while thriving in any ordinary garden soil, most of the species (Bidens) are of no merit as garden flowers. We must also bear in mind that the Bidens (two-tooth) mentioned by Mr. J. M. Hooker is of a different species to both the above-named ones. It is distinctly stated to be the "*B. chrysanthemoides.*"

J. M. Hooker (Philadelphia).—*The "Yellow Flower."*—We are obliged for noting printer's error on page 463, and, as will be seen in above reply to Mr. J. M. Hamilton, the error has been corrected.

A. E. T. M. (Redhill).—Picture Postcards.—We rather think that the numerous photographic printers who undertake "copying" work at low rates will remove any difficulty such as you suppose is felt with regard to picture postcards. Much obliged for specimens, which are very well done, and we will keep list of prices by us.

South Devon (Devonport).—Bee-candy.—Your sample is fairly good on most points, but it appears a little underdone, and has not been kept stirred long enough (after removal from fire) to give it the smooth, "buttery" grain so desirable in soft candy.

John Wilce (Ruardean, Glos.).—Experts' Certificates.—Members of county associations must apply for particulars regarding the above to the Hon. Sec. of their B.K.A., and non-members to Mr. E. H. Young, Sec. B.B.K.A., 12, Hanover-square, London.

A. C. Lew (Maldon).—Photos of Apiaries.—Kindly send both photos (for choice), and, if suitable, we will be very pleased to include the best in our bee-garden pictures. Many thanks for appreciation and good wishes, which are cordially reciprocated.

T. E. Hartshorne (Salop).—Bee-candy.—While thanking you for the offer of help to readers with regard to making candy, it is preferable that information sought by readers, beyond what is given in "Guide Book," should come, in the usual way, from ourselves, and for which we become responsible.

*** *Several Letters and Queries are unavoidably held over till next week for lack of space.*

Editorial, Notices, &c.

FOUL BROOD LEGISLATION.

The notification—mentioned in the following report of the B.B.K.A. meeting—that Mr. Geo. M. Saunders has resigned his seat on the Committee, and has apparently resolved to take independent action, is much to be regretted. We say this advisedly, because if Mr. Saunders imagines that any course of action he may take—based on direct hostility to that of the Committee appointed to deal with the proposed Foul Brood Bill—can result other than disastrously to the cause he claims to be so anxious to serve, we fear he will be woefully disappointed. That any level-headed man, possessing ordinary business tact, will fail to see this after perusing the recent circulars which Mr. Saunders is so industriously sending out broadcast, we fail to believe, if those who read them will trouble to acquaint themselves with the proved facts of the case, as shown recently in our columns.

Where is the good, we ask, of further discussion with one who misconstrues everything that is said, and puts a false construction on all that is done by the Committee in order to serve his own ends?

Not only so, but Mr. Saunders continuously persists in reading into the communications between the Committee and himself things neither said nor even thought of. Without knowing how many more circulars are to follow "No. 5"—which latter the Committee have refused to recognise—we venture to say that a perusal of Nos. 6 and 7 (before us as we write) will convince any sane man possessing a modicum of business tact, that Mr. Saunders is either "riding for a fall" and wishes to put the onus of failure on other shoulders than his own, or he must take the members of the Committee to be like so many children possessing neither business experience nor ordinary common sense.

We must also say a word on another side of the question—viz., the persistent way in which Mr. Saunders mixes up our own views as Editors with those of the Committee. On this point we may be allowed to say that our personal opinions as Editors stand on precisely the same footing with regard to the B.B.K.A. as those of any other member of the Council, including Mr. Saunders himself.

The circulars before us (Nos. 6 and 7) we consider beneath notice, so far as regards the innuendoes and gross personalities applied to ourselves; but when the B.B.K.A. and its Chairman are assailed the case is different, and to our mind it is quite time the issue of such circulars was stopped.

We trust, therefore, that the respective Executive Committees of all County Associations to whom these missives are sent will take prompt action, and at the earliest opportunity express their opinion with regard thereto, and say if they approve of their subscriptions being used in this way.

The question at issue is whether the Committee chosen to deal with the proposed Foul Brood Bill is or is not to be supported by those by whom it was appointed, and this is obviously a matter which it should not take long to decide in the affirmative.

In penning the final words of our thirty-second volume we put aside the vexed question of bee-politics and turn for a moment to a more pleasant theme, by heartily and sincerely wishing that the coming year may be a happy and prosperous one for Bee Journal readers, no matter how widely our opinions may differ.

The Editors.

BRITISH BEE-KEEPERS' ASSOCIATION

The monthly meeting of the Council was held at 105, Jermyn-street, S.W., on Wednesday, 21st inst., Mr. T. W. Cowan occupying the chair. There was also present Dr. Elliot, Messrs. W. Broughton Carr, W. F. Reid, E. D. Till, T. I. Weston, and the Secretary. Letters explaining enforced absence were read from Colonel Walker, Messrs. R. Godson, W. H. Harris, H. Jonas, F. W. L. Sladen, and W. Woodley.

The minutes of the previous meeting were read and confirmed.

Two new members were elected—viz., Mr Geo. Colley, Wiggenhall Cottage, Watford; and Mr. H. M. Hitchcock, Cove, Farnborough, Hants.

The Finance Committee reported examination of accounts to date, and brought forward a list of payments recommended. The report was approved.

The report of examiners of papers written by thirty-six candidates for second-class certificates was received, and it was resolved to grant certificates to Nos. 4, 6, 11, 18, 22, 25, 28, 35, and 36. Decision in regard to Nos. 13, 15, and 29 is in abeyance. The others, unfortunately, fail for various reasons.

The prize schedule for the R.A.S.E. Show was provisionally drawn up, in the expectation that the exhibition may be held as usual in 1905 at Park Royal.

Mr. Walter F. Reid presented a very interesting report as representative of the Association at the Congress of Bee-keepers at the St. Louis Exhibition, for which a hearty vote of thanks was accorded to him. It was further decided to ask the Editors of the B.B.J. to print the report in full in an early issue of their paper.

A meeting of the Foul Brood Legislation Committee followed. A letter was read from Mr. Geo. M. Saunders resigning his seat on the Committee, and declining to furnish the correspondence asked for by the latter on the ground that the letters in question were not sent to him for such a purpose. Additional circular letters being issued by Mr. Saunders, independently of the Committee were also placed before the meeting. The Committee are, therefore, under the necessity of opening up correspondence in a number of counties, as if no previous communications had taken place on the subject, and thus unnecessary trouble and delay may be occasioned.

A number of replies from County Associations were received and dealt with, and the Committee are hoping for fuller returns at their meeting, which will be held on January 12.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

NOTES BY THE WAY.

[5735.] The foul brood question still fills the pages of our B.B.J., and we get many views from different standpoints. I myself, along with many others, consider that a Foul Brood Bill would be unworkable, will be detrimental to the best interests of bee-keeping, and will fail (if ever carried) to cure or eradicate foul brood. In fact, we go further and say that the appointment of experts with compulsory powers will spread the disease far and wide in districts now free from foul brood. Mr. Weston (on page 506) may try to belittle my correspondents to the proverbial "our cat and another," but I can assure him and others that I have, while the discussion of the Bill has been rife in the B.B.J., received a large number of letters and references to same made by bee-keepers, and I am hoping to get many more, so that we objectors also may approach the "Board of Agriculture" and the County Councils with our view of the "Bee-pest Bill." Mr. Weston refers to vaccination (I am not a "conscientious objector), but I only used the simile in order to show the uselessness of the present Bill as drafted, because of leaving out stray swarms located in all sorts of places, etc. Anyway, as a "cure for foul brood," I assert it will fail utterly.

When writing my "notes" on page 492 I should perhaps have said many of the large bee-keepers, and not "*nearly all*" (*vide* advertisement on page v. this week). I have had no experience of experts' visits or the work they do. My knowledge of the train of disease they leave behind in visiting and *experting* apiaries is gained from others who rue the day they allowed an expert inside their apiaries. Therefore, to those who are the owners of healthy apiaries, I say, take note of this.

Our friend the county councillor—who writes on page 506—has put the cost of administering the Act at a very low figure in fixing the salaries of experts at an average of £100 a year. I estimate that it would cost our Berks C.C. quite £200 per year to work the Act.

To my old friend Mr. Loveday (5728, page 506) I say there has been a practical side to my knowledge of foul brood. I know it the moment I see it, either in the larva stage or fully developed, as shown in Mr. Cowan's photo. I had it within three miles of my apiary several years ago, and was asked by the skeppist bee-keepers whose hives were affected for help and advice, and by following the advice I gave them it has been cleared out. Who among bee-keepers does Mr. Loveday think will be heard by the County Council as to any negligence or inefficiency in the expert? If our friend had any practical experience of public appointments he would know how futile it is to hope to get an appointment cancelled except for a flagrant offence.

I close my notes with "goodwill towards men," *especially bee-men*. May the coming year bring a large measure of prosperity to our industry is the wish of yours fraternally—W. Woodley, Beedon, Newbury.

FOUL BROOD LEGISLATION.

[5736.] I think our Editors have given Mr. W. Woodley plenty of rope in throwing cold water on the above in his "Notes by the Way" (page 417). But when he talks about those who make a living out of their bees being "hard hit," I would reply: How many have been "hard hit" by that class of men? I remember when foul brood was not much heard of in this county a certain dealer advertised Italian queens, and in consequence some of these were introduced into our county, and although these queens were used by known and capable experts, foul brood broke out in most of the hives to which they were introduced.

If, as Mr. Woodley says, nearly all the large bee-keepers and honey-producers in England are in opposition to the Act, it would be interesting to know why this should be? Is it because they are afraid the inspector may find foul brood there,

and stop the sale of their bees and queens? I hope the Bill will become law, and trust that every County Association will stand by the parent Association and support it both by work and financial help. In fairness to Mr. Woodley, let me say I have had many queens from him, and have always been satisfied.—J. PEARMAN, Derby.

[5737.] Kindly forward the five issues of B.B.J. from September 29 to October 27. These number contain accounts of the Conference of Bee-keepers, called for the purpose of discussing a proposed Bill for dealing with Foul Brood, and as I gave my copies away to a friend interested in the subject, I want them replaced to complete the volume for binding. I am very glad to see the turn matters have taken on this much-discussed question. Instead of Mr. Saunders being allowed to push forward a Bill in such an abrupt fashion, without full preliminary examination or free discussion, the proposed measure has now been placed under the guidance and authority of a representative body of well-informed bee-keepers, who have already amended the original Bill for the better. It is also certain that the B.B.K.A. Committee will have a far better chance of obtaining Parliamentary powers than Mr. Saunders could possibly have had. I can quite see that the hon. secretary of our Cumberland Bee-keepers' Association will be piqued at the turn affairs have taken; but I think he certainly overstepped the mark in stating that a vote through the B.B.J. would not be representative as to the opinion of bee-keepers in general with regard to the desirability or not of legislation. As a member of the Cumberland B.K.A. I refrain from saying anything that might be considered vindictive; but I am thankful that the original promoters of the Bill are not to be displaced from their proper position in the business. I hope later, when I gain more experience among bees, to try and write now and then for your journal, which I must say no up-to-date bee-keeper should be without.—L. BURNETT, Eskdale, Carnforth.

PACKING RACKS WITH CHAFF.

[5738.] In answer to your correspondent, "Suffolk," Colchester, in B.B.J. of December 15 (page 498), I am always pleased to give any information I can on the working of my hives. My method is as follows:—About the first week in June I put on either a rack of sections or a box of shallow-frames. First smoke the bees down into body-box, then put on a queen-excluder, and above this one rack of sections or shallow-frames. On this I lay a piece of clean calico, then a piece of brown paper same size as rack or box. I then pack down sides and top of section-rack with chaff. When the bees are up in surplus-chambers take a small hand-brush and brush all loose chaff from the top and sides of latter, then lift off the full rack with bees and put an empty one on excluder, placing the full one on top. Pack down the whole and leave them until the autumn.

I have found this plan prevents swarming, and would be suitable for all out-apiaries.—J. POVALL, Bodfari, Trefnant, R.S.O., December 20.

NEAREST HEATHER TO LEICESTER.

[5739.] I gather that there is no heather in Leicestershire, and therefore ask: Would any reader of B.B.J. kindly tell me which is the nearest heather to Leicester, and which is the cheapest way of sending stocks to the moors by rail.

No doubt some of the B.B.J. readers have had much experience in these things, and would gladly say if you will be kind enough to put it before them. Wishing you, Messrs. Editors, the compliments of the season, I send name, and sign—SEVEN YEARS' SUBSCRIBER, December 21.

Queries and Replies.

[3634.] *A Beginner's Queries.*—I should be obliged for reply to the following queries: 1. I commenced the season of 1904 with two stocks, one very weak in bees, the other fairly strong. From the two hives I obtained about 30 lbs. extracted honey only, which I consider disappointing, but I am only a beginner. I attribute the small quantity of surplus to the fact that the strongest hive contained too many drones. I used quarter sheet of worker foundation on the frames, but the bees invariably filled up the frame with a great quantity of drone cells. 2. I find it stated in the Guide-Book that if the frames are set 1¼ inch from centre to centre, worker comb only will be produced. I should be glad to know if this is an infallible rule, or whether I shall have to use full sheets of foundation to prevent a repetition of last season's trouble. I send name for reference, and sign—"DANUM," Doncaster.

REPLY.—1. It is well-known by experienced bee-keepers that when an established stock requires additional combs in order to make up the full number of frames, the latter must be fitted with full sheets of worker-cell foundation, otherwise a great deal of superfluous drone-comb will be built. You will therefore need to cut out

all the drone-comb and replace with worker-cell foundation, which must be "wired" in. 2. Quite infallible if done at the proper time—viz., when hiving the swarm. But you cannot space the combs now in the hive 1¼ in. apart; they would touch in some places, and prevent all ease in manipulating the frames.

[3635.] *Giving Candy in Winter.*—It is only the last three weeks that I have taken in your journal, and am greatly interested in reading same. Last May I bought a hive and bees. Not knowing much about them, a bee-keeper friend hived them for me. Next day I left home, and on my return a month later found the hive queenless. I procured another queen, but got no surplus honey. I have reason to think, at end of October, that the bees had not sufficient food to carry them through the winter, so with help of the "Guide Book" attempted to make bee-candy, which I put in on the *top of frames*, under the quilts. I showed a piece of candy to a friend, who tells me it is much too hard and useless. Now for your advice: 1. Is it too late, if we had a fairly mild day, to uncover the quilts to get out the hard candy? 2. If I attempt to remove the candy would the bees require smoking? 3. Should the fresh candy be placed on the frames under the quilts or over the quilt-hole? 4. I shall be glad to support the Kent County B.K.A. or anything else in the interest of bee-keepers. —H. E. W., Sevenoaks.

REPLY.—1. No; the quilts may be safely removed on any day when the bees are flying freely. 2. Just a little smoke may be required, but not if bees are quiet. 3. If candy is soft—as it should be—and can be pressed into mound-shape so that coverings will be close on all sides, it may lie direct on frame-tops; but if supplied in boxes with glass tops, as sent out by many dealers, it should be placed above the feed-hole. 4. We will gladly give you particulars if the Kent B.K.A. is restored to its former activity and usefulness, as there are signs of its being ere long.

[3636.] *Grubs on Floorboard of Hive.*—To-day I discovered on the floorboard of one of my hives, which latter was very damp, a lot of dead bees, wet and mixed up, and apparently being eaten by numbers of grubs or maggots, of which I enclose a sample. My experience in bee-keeping has not been very scientific, my methods being of the happy-go-lucky kind, and the trouble taken so far almost *nil*, and I am therefore rather anxious to know whether these worms are a sign of disease or of danger. I immediately removed, thoroughly cleaned, and disinfected floorboard, and strewed lime on the ground round hive. Being a very foggy day I did not disturb bees, but they seemed weak, and rather short of food.—J. H. S., Shepton Mallet, December 21.

REPLY.—The "grubs" sent are simply crysalids of some of the numerous insects found in decayed or putrefying animal matter—dead bees in your case. Now that they have been disposed of no further harm will follow. The bees short of stores will, however, need attention by way of giving soft candy to make up for the shortage, or they will probably not survive the trials of winter. We also advise giving up "happy-go-lucky methods," as they will not do at all with bees.

[3637.] *Mottled Appearance of Granulated Honey.*—I have sent a 1-lb. jar of granulated honey for your inspection, and, as will be seen, it is a dark honey, but portions of it show almost white at sides of jar. It is only in the screw-cap jars that this appearance is seen, the honey in tie-overs keeping its colour all right. I am at a loss to know why this is so, and fear that some of my customers will not like to purchase it as seen. Kindly let me know the cause of it in next week's B.B.J. I send name, etc., for reference, and sign myself ENQUIRER, Cinderford, December 21.

REPLY.—The mottled appearance seen at sides of glass in sample is caused mainly by minute air-bubbles in the honey at time of jarring-off. This is shown by the thick coating of white on the surface of honey in the jar sent. In some cases the same effect is produced by filling the jars too rapidly and not allowing time for the air-bubbles to rise to the surface before screwing on the metal caps. We might have a better chance of forming an accurate opinion on the sample if we knew the exact way in which the tie-over jars were treated; but from the details given we judge the result to be as stated above.

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

The following useful "Notes" regarding the apiary seen on next page and its owner need no addition from us. Mr. Richards says:—

"My first remembrance of the honey-bee dates back to the early sixties, when as a small boy I remember a most elaborate mahogany observatory hive, made by my father, placed in front of the sitting-room window, in the sash of which was cut a passage-way for the bees to the outside. I also well remember eating comb-honey taken from bell-glasses worked on the top of this hive. I never thought of keeping bees till compelled to give up my hobby of bird breeding for show purposes through being ordered to keep out of doors

as much as possible, owing to illness. So in the summer of 1901 I looked about me and succeeded in hearing of a dozen stocks for sale, half in frame-hives, the remainder in skeps, and bought the lot—thus making my first mistake, as I knew nothing about either bees or hives. After some trouble I found a so-called 'bee-master,' who professed to be able to do everything required in removing the hives to my own home, six miles away. I gave him the job to do in his own way. He was to bring two of the frame-hives on the first journey, and, although it was the month of July, he simply put the hives into a cart with no packing, entrances closed up, and nearly everything left to take its chance; so that when my bee-man and his load got to my place, the honey was running out at the cart-tail! In this way the first look I ever had of the insides of hives was to behold a mass of comb-honey and dead bees in the bottom of each. Here were two stocks gone for a start. Novice as I was, I removed the remainder myself and got them home all safe. About this time I had the good fortune to come across Mr. Cann—expert of the Devon B.K.A.—who gave me all the information required about bees. I then joined the Devon B.K.A., and through it received the *Bee-keepers' Record*. Later on I began to take the BRITISH BEE JOURNAL, and then got Cowan's 'Guide Book.' I was now in a fair way of getting the bee-fever. Being an engine-fitter by trade, I thought I could make my own hives, etc. I began by purchasing wood for six hives of similar pattern to those I first bought, and had got all the wood cut up when the 'Guide Book' came to hand. I then found I was all wrong, for my pattern was a nine-frame hive with single walls. However, having gone so far, I finished them off and prepared them for use the following year. As I intended the bees in skeps to transfer themselves to frame-hives, I put the skeps on top-bars of frames, covered all warmly, and thought all safe for next year. During the winter I studied the 'Guide Book' and made preparations for the spring by ordering all requirements needed. I was constantly watching entrances, and it seemed to me that the bees were fraternising all around, by passing from one hive to another. I took first chance to examine, and found three hives empty—not even a dead bee left—though there was plenty of sealed food in each. The other hives, too, did not progress at all well. I found dead brood in the combs, so sent samples on to the B.B.J. for editorial inspection, and was astonished to learn in reply that I had 'sent up enough foul brood to infect a whole district.' I therefore made a bonfire of the lot, after smothering the bees! But I was not to be done, for I sent to a reliable dealer for

MR. F. J. RICHARDS'S APIARY, PLYMOUTH, DEVONSHIRE.

a 'W. B. C.' hive with non-swarming chamber, and also two good stocks of bees. I then got a 'W. B. C.' from another maker, and in May, 1902, I got two stocked with bees and located four miles apart in opposite directions from my first apiary. In this way I secured 50 lb. of surplus honey from the two new hives. I fed them up according to directions, and packed down for winter. I was busy all winter making hives and preparing for next season. All four stocks came out in good condition in 1903. I made two artificial swarms and got 2 cwt. of surplus honey.

"All of these came out in splendid condition in the spring of 1904. I saw no signs of foul brood, but the end of the honey flow found me with only an average of 45 lb. of surplus per hive.

"I have a good sale for all my honey, as I do it up in attractive form, and one needs to get a fair-paying price if this is done. I find the farmers bring in a lot of honey and sell it at almost any price rather than take it home again. The hive I like best is—the 'Perfection W.B.C.'—similar to the one I am resting on in photo, with my own slight alterations to suit my own ideas. The posts shown in photo I use to carry an awning in hot sunny weather. The hives were made by myself except the two mentioned."

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

G. R. (Knedlington, Yorks).—Hive-making.—1. In using broad-shouldered frames in the "W.B.C." hive in lieu of metal ends, your only safe plan of arriving at measurements is to place the dozen frames together and measure over all before cutting timber for body-box. We could measure it out ourselves in no other way. 2. When making lifts to telescope over each other, the point to take note of is not to allow so much "play" in size of lifts as to afford space for robber bees to enter at the junction. Anything less than $\frac{3}{8}$ in. will do, so that a shade under the $\frac{1}{4}$ in. you propose will answer.

B. B. (Staffs.).—Packing hives for Transit by Rail.—1. The best time for sending stocks of bees away by rail is February or early in March. The weather is then cool, and bees fewer in numbers than at any other season. 2. With regard to safe packing with the "W.B.C." hive, we cannot improve on the directions given on page 117 of "Guide Book," and as you have the book you will be safe if instructions are carefully followed, in which case there is no need for a special "travelling-box" for the bees.

Diver (Co. Kerry).—Hives for Heather Going.—We do not know what form of heather-hive is most approved in Ireland, but for security, handiness, and moderate price the best hive we know of for heather going is that made by W. P. Meadows, Syston, near Leicester.

N. A. J. (Hunts).—Painting Hives Inside.—Although new hives are never painted inside, it is quite a common, and very useful, thing to paint hives both inside and out, when disinfecting them for any reason.

B. B. (Somerset).—Candy-making.—The sample sent is excellent in grain and softness—in fact, too good for us to expect any amateur to equal it. Only those whose business is sugar-boiling succeed in producing a fondant sugar exactly similar in grain and softness to a chocolate cream. The sample, however, is spoiled in medicating. Soluble phenyle would be far preferable to that used, being almost odourless, and equally effective for the purpose. We shall be glad to have a sample of your own candy after trial of the thermometer, being only desirous of helping bee-keepers in any way we can if the process is simple and effective for tthe purpose. Sorry for our "slip" in connection with your last letter, but we only followed our general rule.

Honey Samples.

W. G. (Banff).—The small sample labelled "W. Gray" is real Scotch heather honey of excellent quality. That in a 1-lb. jar has not been gathered from heather at all, and there is no comparison between the two so far as regards quality. The last-named is fair in flavour, and from mixed sources, but certainly contains no heather-honey.

A. B. (Scotland).—There is lime-honey in your sample, along with that from other sources, but the whole is in some measure spoilt by honey-dew. Apart from that fault, it is of good quality.

Candy (Salop).—The sample sent is too hard for use as bee-food. You do not say what recipe has been followed in making, but the result is certainly not soft candy, which latter, to be good, should be smooth, and buttery in grain—something like the fondant sugars used in chocolate creams.